code of federal regulations

47

Telecommunication

PARTS 70 TO 79

Revised as of October 1, 1972

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Telecommunication

PARTS 70 TO 79

Revised as of October 1, 1972

CONTAINING
A CODIFICATION OF DOCUMENTS
OF GENERAL APPLICABILITY
AND FUTURE EFFECT

AS OF OCTOBER 1, 1972

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Explanation

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The Code of Federal Regulations is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. The Code is divided into 50 titles which represent broad areas subject to Federal regulation. Each title is divided into Chapters which usually bear the name of the issuing agency. Each Chapter is further subdivided into Parts covering specific regulatory areas.

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Title 1 through Title 16	as of January 1
Title 17 through Title 27	as of April 1
Title 28 through Title 41	as of July 1
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Users of the Code should consult the cover of each volume to determine the revision date.

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Guide to Federal Register Finding Aids.	Table of Finding Aids and location in Federal Register Publications.	1 CFR App. C
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Parallel Tables of Presidential Documents.	Table of Proclamations and Executive orders included or cited in CFR.	3 CFR

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Title 47—Telecommunication

(This book contains Parts 70 to 79)

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(Continued)

(Parts 70 to 79)

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76	Cable television service.
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Cross References:

Excise taxes on radio and television sets: Internal Revenue, 26 CFR Part 48.

Excise taxes on communications services and facilities: Internal Revenue, 26 CFR Part 49.

Tax on gain from sale or exchange of radio broadcasting stations to effectuate policies of FCC: Internal Revenue, 26 CFR 1.1071.

Federal financial assistance for noncommercial educational television broadcast facilities: Department of Health, Education, and Welfare, General Administration, Public Welfare: 45 CFR, Part 60.

Supplemental Publications:

Annual Reports of the Federal Communications Commission to Congress.

Federal Communications Commission Reports of Orders and Decisions.

Communications Act of 1934 (with amendments and index thereto), Recap. Version to January 1969, Packets No. 1 through 5.

Statistics of Communications Common Carriers, 1969.

Miscellaneous Publications:

Study Guide and Reference Material for Commercial Radio Operator Examinations, May 1955 edition. Figure M–3, Estimated AM Ground Conductivity of the United States (set of two maps).

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AUTHORITY: The provisions of this Part 73 issued under sec. 4 and 303, 48 Stat. 1066, as amended, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply secs. 301, 303, 307, 48 Stat. 1081, 1082, as amended, 1083, as amended, 47 U.S.C. 301, 303, 307. Other statutory and executive order provisions authorizing or interpreted or applied by specific sections are cited to text.

Subpart A—Standard Broadcast Stations

SOURCE: The provisions of this Subpart A appear at 28 F.R. 13574, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS

§ 73.1 Standard broadcast station.

The term "standard broadcast station" means a broadcasting station licensed for the transmission of radiotelephone emissions primarily intended to be received by the general public and operated on a channel in the band 535–1605 kilocycles per second (kc/s).

[33 F.R. 15417, Oct. 17, 1968]

§ 73.2 Standard broadcast band.

The term "standard broadcast band" means the band of frequencies extending from 535 to 1605 kc/s.

[33 F.R. 15417, Oct. 17, 1968]

§ 73.3 Standard broadcast channel.

The term "standard broadcast channel" means the band of frequencies occupied by the carrier and two side bands of a broadcast signal with the carrier frequency at the center. Channels shall be designated by their assigned carrier frequencies. The 107 carrier frequencies assigned to standard broadcast stations shall begin at 540 kc/s and be in successive steps of 10 kc/s.

[33 F.R. 15417, Oct. 17, 1968]

§ 73.4 Dominant station.

The term "dominant station" means a Class I station, as defined in § 73.21, operating on a clear channel.

§ 73.5 Secondary station.

The term "secondary station" means any station, except a Class I station, operating on a clear channel.

[33 F.R. 15417, Oct. 17, 1968]

§ 73.6 Daytime.

The term "daytime" means that period of time between local sunrise and local sunset.

§ 73.7 Nighttime.

The term "nighttime" means that period of time between local sunset and local sunrise.

[33 F.R. 4410, Mar. 12, 1968]

§ 73.8 Sunrise and sunset.

The terms "sunrise" and "sunset" mean, for each particular location and during any particular month, the time of sunrise and sunset as specified in the instrument of authorization. See § 73.83.

[33 F.R. 4410, Mar. 12, 1968]

§ 73.9 Broadcast day.

The term "broadcast day" means that period of time between local sunrise and 12 midnight local time.

[33 F.R. 4410, Mar. 12, 1968]

§ 73.10 Experimental period.

The term "experimental period" means that time between 12 midnight local time and local sunrise. This period may be used for experimental purposes in testing and maintaining apparatus by the licensee of any standard broadcast station on its assigned frequency and with its authorized power, provided no interference is caused to other stations maintaining a regular operating schedule within such period. No station licensed for "daytime" or "specified hours" of operation may broadcast any regular or scheduled program during this period.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 4410, Mar. 12, 1968]

§ 73.11 Service areas.

(a) The term "primary service area" of a broadcast station means the area in which the groundwave is not subject to objectionable interference or objectionable fading.

(b) The term "secondary service area" of a broadcast station means the area served by the skywave and not subject to objectionable interference. The signal is subject to intermittent variations in intensity.

(c) The term "intermittent service area" of a broadcast station means the area receiving service from the groundwave but beyond the primary service area and subject to some interference and fading.

§ 73.12 Portable transmitter.

The term "portable transmitter" means a transmitter so constructed that it may be moved about conveniently from place to place, and is in fact so moved about from time to time, but not ordinarily used while in motion. In the standard broadcast band, such a transmitter is used in making field intensity measurements for locating a transmitter site for a standard broadcast station. A portable broadcast station will not be licensed in the standard broadcast band for regular transmission of programs intended to be received by the public.

§ 73.14 Technical definitions.

(a) *Combined audio harmonics.* The term "combined audio harmonics" means the arithmetical sum of the amplitudes of all the separate harmonic components. Root sum square harmonic readings may be accepted under conditions prescribed by the Commission.

(b) *Effective field.* The term "effective field" or "effective field intensity" is the root-mean-square (RMS) value of the inverse distance fields at a distance of 1 mile from the antenna in all directions in the horizontal plane.

(c) *Nominal power.* "Nominal power" is the power of a standard broadcast station, as specified in a system of classification which includes the following values; 50 kw., 25 kw., 10 kw., 5 kw., 1 kw., 0.5 kw., 0.25 kw.

(d) *Operating power.* Depending on the context within which it is employed, the term "operating power" may be synonomous with "nominal power" or "antenna power."

(e) *Maximum rated carrier power.* "Maximum rated carrier power" is the maximum power at which the transmitter can be operated satisfactorily and is determined by the design of the transmitter and the type and number of vacuum tubes used in the last radio stage.

(f) *Plate input power.* "Plate input power" means the product of the direct plate voltage applied to the tubes in the last radio stage and the total direct current flowing to the plates of these tubes, measured without modulation.

(g) *Antenna power.* "Antenna input power" or "antenna power" means the product of the square of the antenna current and the antenna resistance at the point where the current is measured.

(h) *Antenna current.* "Antenna current" means the radio-frequency current in the antenna with no modulation.

(i) *Antenna resistance.* "Antenna resistance" means the total resistance of the transmitting antenna system at the operating frequency and at the point at which the antenna current is measured.

(j) *Modulator stage.* "Modulated stage" means the last amplifier stage of the modulating wave which modulates a radio-frequency stage.

(k) *Modulated stage.* "Modulated stage" means the radio-frequency stage to which the modulator is coupled and in which the continuous wave (carrier wave) is modulated in accordance with the system of modulation and the characteristics of the modulating wave.

(l) *Last radio stage.* "Last radio stage" means the oscillator or radio-frequency-power amplifier stage which supplies power to the antenna.

(m) Percentage modulation (amplitude):

In a positive direction:

$$M=\frac{MAX-C}{C}\times 100$$

In a negative direction:

$$M=\frac{C-MIN}{C}\times 100$$

Where:

M = Modulation level in percent.

MAX = Instantaneous maximum level of the modulated radio frequency envelope.

MIN = Instantaneous minimum level of the modulated radio frequency envelope.

C = (Carrier) level of radio frequency envelope without modulation.

(n) *Maximum percentage of modulation.* "Maximum percentage of modulation" means the greatest percentage of modulation that may be obtained by a transmitter without producing in its output harmonics of the modulating frequency in excess of those permitted by these regulations.

(o) *High level modulation.* "High level modulation" is modulation produced in the plate circuit of the last radio stage of the system.

(p) *Low level modulation*. "Low level modulation" is modulation produced in an earlier stage than the final.

(q) *Plate modulation*. "Plate modulation" is modulation produced by introduction of the modulating wave into the plate circuit of any tube in which the carrier frequency wave is present.

(r) *Grid modulation*. "Grid modulation" is modulation produced by introduction of the modulating wave into any of the grid circuits of any tube in which the carrier frequency wave is present.

(s) *Blanketing*. Blanketing is that form of interference which is caused by the presence of a broadcast signal of 1 v/m or greater intensity in the area adjacent to the antenna of the transmitting station. The 1 v/m contour is referred to as the blanket contour and the area within this contour is referred to as the blanket area.

[28 F.R. 13574, Dec. 14, 1963, as amended at 37 F.R. 7514, 7516, Apr. 15, 1972]

§ 73.15 NARBA and U.S./Mexican Agreement.

The term "NARBA" where used in this part means the North American Regional Broadcasting Agreement, signed at Washington, D.C., November 15, 1950, which entered into force April 19, 1960, and to which the signatory countries are The Bahama Islands and Jamaica, Canada, Cuba, the Dominican Republic, and the United States of America. The term "U.S./Mexican Agreement" where used in this part means the Agreement between the United States of America and the United Mexican States Concerning Radio Broadcasting in the Standard Broadcasting Band (535–1605 kHz), signed at Mexico, D.F., December 11, 1968, which entered into force November 18, 1970.

[35 F.R. 18052, Nov. 25, 1970]

ADMINISTRATIVE PROCEDURE

§ 73.17 Cross reference.

See Subpart D of Part 1 of this chapter for general requirements as to applications, filing of applications and description of application forms, other forms and information to be filed with the Commission, the manner in which applications are processed, and provisions applying to action on applications. See § 1.1111 of Subpart G of that part for the fees to be paid in connection with applications for facilities in the service covered in this subpart.

§ 73.18 Notification of filing of applications.

(a) *Radio Astronomy and Radio Research Installations*. In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, West Virginia, and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, West Virginia, an applicant for authority to construct a new standard broadcast station or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39°15′ N. on the north, 78°30′ W. on the east, 37°30′ N. on the south, and 80°30′ W. on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P.O. Box No. 2, Green Bank, West Virginia, 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the observatory. After receipt of such applications, the Commission will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(b) *Location on Government land*. Applicants proposing to construct a radio station on a site located on land under the jurisdiction of the U.S. Forest Service, U.S. Department of Agriculture, or the Bureau of Land Management, U.S. Department of the Interior, must supply the information and must follow the procedure prescribed by § 1.70 of this chapter.

[28 F.R. 13574, Dec. 14, 1963, as amended at 32 F.R. 2890, Feb. 15, 1967]

ALLOCATION OF FACILITIES; AUTHORIZATIONS

§ 73.21 Classes of standard broadcast channels and stations.

(a) *Clear channel.* A clear channel is one on which the dominant station or stations render service over wide areas, and which are cleared of objectionable interference within their primary service areas and over all or a substantial portion of their secondary service areas. Stations operating on these channels are classified as follows:

(1) *Class I station.* A class I station is a dominant station operating on a clear channel and designed to render primary and secondary service over an extended area and at relatively long distances. Its primary service area is free from objectionable interference from other stations on the same and adjacent channels, and its secondary service area free from interference except from stations on adjacent channels, and from stations on the same channel in accordance with the channel designation in § 73.25 or §73. 182. The operating power shall not be less than 10 kilowatts nor more than 50 kilowatts. (Also see § 73.25 (a) for further power limitation.)

(2) *Class II station.* A Class II station is a secondary station which operates on a clear channel (see § 73.25) and is designed to render service over a primary service area which is limited by and subject to such interference as may be received from Class I stations. Whenever necessary a Class II station shall use a directional antenna or other means to avoid interference with Class I stations and with other Class II stations, in accordance with § 73.182 (and § 73.22 in the case of Class II-A stations). Class II stations are divided into three groups:

(i) *Class II-A station.* A Class II-A station is an unlimited time Class II station operating on one of the clear channels listed in § 73.22 and assigned to a community within a state specified in the Table contained in that section. A Class II-A station shall operate with power of not less than 10 kilowatts nighttime nor more than 50 kilowatts at any time.

(ii) *Class II-B station.* A Class II-B station is an unlimited time Class II station other than those included in Class II-A. A Class II-B station shall operate with power not less than 0.25 kilowatts nor more than 50 kilowatts.

NOTE: The Class II station operating unlimited time on 760 kc/s at San Diego, Calif., shall be limited to a power of 5 kw and the Class II station operating unlimited time on 750 kc/s at Anchorage, Alaska, shall be limited to a power of 10 kw. Both stations shall protect the I-A station on the same frequency to its 0.5 mv/m 50 percent skywave contour.

(iii) *Class II-D station.* A Class II-D station is a Class II station operating daytime or limited time. A Class II-D station shall operate with power not less than 0.25 kilowatts nor more than 50 kilowatts.

(b) *Regional channel.* A regional channel is one on which several stations may operate with powers not in excess of 5 kilowatts. The primary service area of a station operating on any such channel may be limited to a given field intensity contour as a consequence of interference.

(1) *Class III station.* A Class III station is a station which operates on a regional channel and is designed to render service primarily to a principal center of population and the rural area contiguous thereto. Class III stations are subdivided into two classes.

(i) *Class III-A station.* A Class III-A station is a Class III station which operates with power not less than 1 kilowatt nor more than 5 kilowatts and the service area of which is subject to interference in accordance with § 73.182.

(ii) *Class III-B station.* A Class III-B station is a Class III station which operates with power not less than 0.5 kilowatt, nor more than 1 kilowatt night and 5 kilowatts daytime, and the service area of which is subject to interference in accordance with § 73.182.

(c) *Local channel.* A local channel is one on which several stations operate with powers no greater than provided in this paragraph. The primary service area of a station operating on any such channel may be limited to a given field intensity contour as a consequence of interference. Such stations operate with power no greater than 250 watts nighttime, and no greater than 1 kilowatt daytime (except that for stations in an area in the State of Florida south of the parallel 28° north latitude, and between the meridians 80° and 82° west longitude, power is limited to 250 watts, daytime and nighttime).

(1) *Class IV station.* A Class IV station is a station operating on a local channel and designed to render service primarily to a city or town and the suburban and rural areas contiguous thereto. The power of a station of this class shall not be less than 0.25 kilowatt, and not more than 0.25 kilowatt nighttime and 1 kilowatt daytime, and its service area is subject to interference in accordance with § 73.182. Stations which are licensed to operate with 100 watts day or night may continue to do so.

NOTE 1: Under NARBA, the power ceiling for Class IV stations is 250 watts daytime, as well as nighttime. The U.S./Mexican Agreement permits such stations to operate with power not in excess of 1 kilowatt daytime. Pursuant to the U.S./Mexican Agreement and informal coordination with the NARBA signatories, the Commission will consider applications for Class IV stations on local channels with daytime powers in excess of 250 watts, up to 1 kilowatt, if such stations are outside of the area specified in paragraph (c) of this section, and if no objectionable interference would be caused (under the standards set forth in the pertinent international agreement) to a duly notified station in Mexico, Haiti, or any foreign country signatory to NARBA.

NOTE 2: Class IV stations located within 100 kilometers (62 miles) of the Mexican border, and presently authorized to operate with a daytime power of 250 watts, may file applications for increases in daytime power to 1 kilowatt. However, such an application will be granted only after coordination with Mexico of the proposed increase, if required, pursuant to Annex IV to the U.S./Mexican Agreement.

NOTE 3: All authorizations of new or changed Class I-B, Class II-B, Class II-D, Class III, or Class IV facilities after October 30, 1961, are subject to whatever interference may be received from, or whatever overlap of 2.0 mv/m and 25 mv/m groundwave contours or overlap of 25 mv/m groundwave contours may be involved with, previously or subsequently authorized Class II-A facilities.

[28 F.R. 13574, Dec. 14, 1963, as amended at 31 F.R. 8068, June 8, 1966; 35 F.R. 18052, Nov. 25, 1970]

§ 73.22 Assignment of Class II-A stations.

(a) *Table of assignments.* One Class II-A station may be assigned on each channel listed in the following table within the designated State or States:

Channel (kc/s)	Location of existing Class I station	State(s) in which Class II-A assignment may be applied for
670	Chicago, Ill	Idaho.
720	Chicago, Ill	Nevada or Idaho.
780	Chicago, Ill	Nevada.
880	New York, N.Y	North Dakota, South Dakota, or Nebraska.
890	Chicago, Ill	Utah.
1020	Pittsburgh, Pa	New Mexico.
1030	Boston, Mass	Wyoming.
1100	Cleveland, Ohio	Colorado.
1120	St. Louis, Mo	California or Oregon.
1180	Rochester, N.Y	Montana.
1210	Philadelphia, Pa	Kansas, Nebraska or Oklahoma.

(b) *Minimum service to "white" areas.* No Class II-A station shall be assigned unless at least 25 percent of its nighttime interference-free service area or at least 25 percent of the population residing therein receives no other interference-free nighttime primary service.

(c) *Power.* Class II-A stations shall operate with not less than 10 kw power nighttime.

(d) *Protection.* (1) *Protection by Class II-A stations to other stations.* The co-channel Class I-A station shall be protected by the Class II-A station to its 0.1 mv/m contour daytime and its 0.5 mv/m 50 percent skywave contour nighttime. All other stations of any class authorized on or before October 30, 1961, shall normally receive protection from objectionable interference from Class II-A stations as provided in § 73.182.

(2) *Protection to Class II-A stations.* A Class II-A station shall normally receive daytime protection to its 0.5 mv/m groundwave contour and nighttime protection to the contour to which it is limited by the co-channel Class I-A station.

(e) *Applications not complying with this section.* Applications for Class II-A stations which do not meet the requirements of paragraphs (b) and (c) of this section will be returned without further consideration.

§ 73.23 Time of operation of the several classes of stations.

The several classes of standard broadcast stations may be licensed to operate in accordance with the following:

(a) Unlimited time permits operation without a maximum limit as to time.

(b) Limited time is applicable to Class II (secondary) stations operating on a clear channel with facilities authorized before November 30, 1959. It permits operation of the secondary station during daytime, and until local sunset if located west of the dominant station on the channel, or if located east thereof, until sunset at the dominant station, and in addition during night hours, if any, not used by the dominant station or stations on the channel.

(c) Daytime permits operation during the hours between average monthly local sunrise and average monthly local sunset. Daytime stations operating on local channels with a power of 0.25 kw may, upon notification to the Commission and to the Engineer in Charge of the radio district in which they are located, operate at hours beyond those specified in their license.

(d) Sharing time permits operation during hours which are so restricted by the station license as to require a division of time with one or more other stations using the same channel.

(e) Specified hours means that the exact operating hours are specified in the license. (The minimum hours that any station shall operate are specified in § 73.71.) Specified hours stations operating on local channels with a power of 0.25 kw, except those sharing time with other stations may, upon notification to the Commission and the Engineer in Charge of the radio district in which they are located, operate at hours beyond those specified in their license.

[28 F.R. 13574, Dec. 14, 1963, as amended at 31 F.R. 8068, June 8, 1966]

§ 73.24 Broadcast facilities; showing required.

An authorization for a new standard broadcast station or increase in facilities of an existing station will be issued only after a satisfactory showing has been made in regard to the following, among others:

(a) That the proposed assignment will tend to effect a fair, efficient, and equitable distribution of radio service among the several states and communities.

(b)(1) That a proposed new daytime station (or change in frequency of an existing daytime station) complies with the standards of station separation set forth in § 73.37.

(2) That a proposed change in daytime facilities (other than a change in frequency or a Class IV station increasing daytime power) does not involve overlap of contours prohibited by § 73.37 with any other station in any area where there is not already such overlap between the two stations.

(3) That a proposed new nighttime operation or change in frequency of any existing nighttime operation (except Class IV stations) would (i) not cause objectionable interference to any existing station (see § 73.182(o)); and (ii) provide a first primary AM service to at least 25 percent of the area within the proposed interference-free nighttime service area or at least 25 percent of the population residing therein.

(4) That a proposed change in nighttime facilities (other than a change in frequency) would not cause objectionable interference to any other station (see § 73.182(o)).

NOTE: The preceding provisions of this paragraph (b) shall not be applied to applications for new Class II–A stations or to applications accepted for filing before July 13, 1964. With respect to such applications, a showing must be made that:

(a) Objectionable interference will not be caused to existing stations or that, if interference will be caused, the need for the proposed service outweighs the need for the service which will be lost by reason of such interference. (For special provisions concerning interference from Class II–A stations to stations of other classes authorized after October 30, 1961, see Note 2 to §§ 73.21 and 73.22(d)). For determining objectionable interference, see §§ 73.182 and 73.186.)

(b) The proposed station will not suffer interference to such an extent that its service would be reduced to an unsatisfactory degree (see § 73.28(d)).

(c) That the applicant is financially qualified to construct and operate the proposed station.

(d) That the applicant is legally qualified. That the applicant (or the person or persons in control of an applicant corporation or other organization) is of good character and possesses other qualifications sufficient to provide a satisfactory public service.

(e) That the technical equipment proposed, the location of the transmitter, and other technical phases of operation comply with the regulations governing the same, and the requirements of good engineering practice. (See technical regulations of this subpart and § 73.188.)

(f) That the facilities sought are subject to assignment as requested under existing international agreements and the rules and regulations of the Commission.

(g) That the population within the 1 v/m contour does not exceed 1.0 percent of the population within the 25 mv/m contour: *Provided, however,* That where the number of persons within the 1 v/m contour is 300 or less the provisions of this paragraph are not applicable.

(h) That, in the case of an application for a Class II station, the proposed station would radiate, during two hours following local sunrise and two hours preceding local sunset, in any direction toward the 0.1 mv/m groundwave contour of a co-channel United States Class I station, no more than the maximum radiation values permitted under the provisions of § 73.187.

(i) That, in the case of an application for a Class II-A station (see § 73.22), 25 percent or more of the area or population within the nighttime interference-free service contour of the proposed station receives no nighttime interference-free primary service from another station.

(j) That the public interest, convenience and necessity will be served through the operation under the proposed assignment.

[28 F.R. 13574, Dec. 14, 1963, as amended at 29 F.R. 9499, July 11, 1964; 33 F.R. 4186, Mar. 6, 1968; 33 F.R. 15417, Oct. 17, 1968]

§ 73.25 Clear channels; Classes I and II stations.

The frequencies in the following tabulations are designated as clear channels and assigned for use by the Classes of stations given:

(a) On each of the following channels, one Class I station will be assigned, operating with power of 50 kw: 640, 650, 660, 670, 700, 720, 750, 760, 770, 780, 820, 830, 840, 870, 880, 890, 1020, 1030, 1040, 1100, 1120, 1160, 1180, 1200, and 1210 kc/s. In addition, on the channels listed in this paragraph, Class II stations may be assigned as follows:

(1) On 670, 720, 780, 880, 890, 1020, 1030, 1100, 1120, 1180, and 1210 kc/s, one Class II-A unlimited time station, assigned and located pursuant to the provisions of § 73.22.

(2) On the channel 750 kc/s, an unlimited time Class II station located at Anchorage, Alaska.

(3) On the channel 760 kc/s, an unlimited time Class II station located at San Diego, California.

(4) On any of the channels listed in this paragraph (to the extent consistent with the assignments provided in subparagraphs (1), (2), and (3) of this paragraph), unlimited time Class II stations located in Alaska, Hawaii, Virgin Islands, or Puerto Rico, which will not deliver more than 5 microvolts per meter groundwave day or night or 25 microvolts per meter 10 percent time skywave at night at any point within the continental limits of the United States excluding Alaska.

(5) On any of the channels listed in this paragraph (to the extent consistent with the Class I, Class II-A, and Anchorage and San Diego Class II assignments provided in this paragraph, and, in the case of limited time stations, subject to the restrictions contained in § 73.38), limited time and daytime only stations, as follows:

(i) In Alaska, Hawaii, Puerto Rico, and Virgin Islands.

(ii) Within the continental United States excluding Alaska, where the station would operate with facilities authorized as of October 30, 1961.

NOTE 1: In view of special circumstances arising from the provision of pre-sunrise broadcast service on 640 kc/s at Ames, Iowa, applications will be accepted for broadcast operations on 640 kc/s between 6:00 a.m. central standard time and local sunrise at Ames, Iowa, with not to exceed 1 kw power: *Provided,* That such applications will be acted upon only after and in light of the decision reached in Docket No. 11290.

NOTE 2: In view of special circumstances arising from the provision of a service during some nighttime hours by a Class II station operating on 830 kc/s at New York, N.Y. (i.e., from 6:00 a.m. to local sunrise and from sunset at Minneapolis to 10:00 p.m. e.s.t.), applications will be accepted for such operation: *Provided,* That they will be acted upon only after and in light of the decision reached in Docket No. 11227.

NOTE 3: The question of whether two Class I stations should be assigned to 770 kc/s, and if so how they should operate, has not been determined.

NOTE 4: See NARBA concerning priority for Canadian Class I-B and Cuban Class I-C assignments on 640 kc/s.

NOTE 5: See NARBA concerning Cuban Class II-E assignments on 660, 670, 760, 780, 830, 1020, 1030, and 1120 kc/s.

NOTE 6: See the U.S./Mexican Agreement concerning Mexican use of 660, 760, 830, 1020, 1030, and 1180 kc/s.

(b) To each of the following channels there may be assigned Class I and Class II stations: 680, 710, 810, 850, 940, 1000, 1060, 1070, 1080, 1090, 1110, 1130, 1140, 1170, 1190, 1500, 1510, 1520, 1530, 1540, 1550, and 1560 kc/s.

NOTE: Class I and Class II stations on 1540 kc/s shall deliver not over 5 microvolts per meter groundwave or 25 microvolts per meter 10 percent time skywave at any point of land in the Bahama Islands, and such stations operating nighttime (i.e., sunset to sunrise at the location of the Class II station) shall be located not less than 650 miles from the nearest point of land in the Bahama Islands.

(c) For Class II stations which will not deliver over 5 microvolts per meter groundwave or 25 microvolts per meter 10 percent time skywave at any point on the Canadian border, and provided that such stations operating nighttime (i.e., sunset to sunrise at the location of the Class II station) are located not less than 650 miles from the nearest point on the Canadian border, 690, 740, 860, 990, 1010, and 1580 kc/s.

NOTE: See NARBA concerning priority for Cuban Class I-B assignment on 1010 kc/s, Class I-C assignments on 690 and 860 kc/s, and Class I-D assignment on 740 kc/s.

(d) The frequencies 730, 800, 900, 1050, 1220, and 1570 kc/s, for Class II stations which operate daytime only, which will not deliver at any point on the Mexican border over 5 microvolts per meter groundwave, and which operate with no more than the following powers:

(1) If not located within the areas specified in subparagraph (2) of this paragraph, 5 kilowatts.

(2) If operating on any of the following frequencies within the following specified areas, no more than one kilowatt:

(i) 800 kc/s: less than 1319 kilometers (820 miles) from Ciudad Juarez, Chihuahua.

(ii) 1050 kc/s: less than 998 kilometers (620 miles) from Monterrey, Nuevo Leon.

(iii) 1570 kc/s: less than 998 kilometers (620 miles) from Ciudad Acuna, Coahuila.

NOTE: See the U.S./Mexican Agreement concerning specific U.S. unlimited time Class II assignments on each of the following channels: 730, 800, 900, 1050, and 1220 kc/s.

(e) The frequency 540 kc/s, for Class II stations which will not deliver a signal of more than 5 microvolts per meter groundwave or 25 microvolts per meter 10 percent skywave at any point on the Canadian border, nor more than 10 microvolts per meter daytime or 50 microvolts per meter nighttime at any point on the Mexican border: *Provided*, That stations operating at night shall be located:

(1) Within the continental United States including Alaska; and

(2) Not less than 650 miles from the nearest point on the Canadian border; and

(3) North of the parallel 35° N. if west of the meridian 93° W., or north of the parallel 30° N. if east of said meridian.

NOTE 1: See U.S./Mexican Agreement concerning a specific U.S. unlimited time assignment on this channel.

NOTE 2: See § 2.106 of this chapter with respect to use of 540 kc/s.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 4410, Mar. 12, 1968; 35 F.R. 18052, Nov. 25, 1970]

§ 73.26 Regional channels; Classes III–A and III–B stations.

The following frequencies are designated as regional channels and are assigned for use by Class III–A and III–B stations: 550, 560, 570, 580, 590, 600, 610, 620, 630, 790, 910, 920, 930, 950, 960, 970, 980, 1150, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1350, 1360, 1370, 1380, 1390, 1410, 1420, 1430, 1440, 1460, 1470, 1480, 1590, and 1600 kc/s.

NOTE: See NARBA concerning Cuban Class I–C assignment on 550 kc/s, Class I–D assignments on 570, 590, 630, 920, 950 and 980 kc/s, and Class III–E assignments on 790, 910, and 1150 kc/s.

§ 73.27 Local channels; Class IV stations.

The following frequencies are designated as local channels and are assigned for use by Class IV stations: 1230, 1240, 1340, 1400, 1450, and 1490 kc/s.

NOTE: See NARBA concerning Cuban Class IV–E assignments on 1240 and 1340 kc/s.

§ 73.28 Assignment of stations to channels.

(a) With respect to applications for new Class II–A stations, and other applications accepted for filing before July 13, 1964, the individual assignments of stations to channels which may cause interference to other United States stations only shall be made in accordance with the provisions of this part for the respective classes of stations involved. (For determining objectionable interference, see §§ 73.22, and 73.182 through 73.186.)

(b) Except as provided in § 73.21(c) concerning Class IV stations, no assignment of a standard broadcast station will be made which would be inconsistent with the provisions of NARBA or the U.S./Mexican Agreement. Similarly, as long as protection for U.S. assignments from Haitian assignments continues, no U.S. assignment of a standard broadcast station will be made which would cause objectionable interference (under the standards set forth in NARBA) to a duly notified Haitian station. (The Haitian stations considered to be duly notified are those notified and accepted in accordance with past agreements, and those subsequently notified in accordance with the procedures and understandings which have pertained thus far.) In all cases where an individual assignment may cause interference with, or may involve a channel assigned for priority of use by, a station in another North American country, the classifications, allocation requirements, and engineering standards set forth in NARBA and the U.S./Mexican Agreement shall be observed.

NOTE: (a) In general, an application for a standard broadcast station assignment, the grant of which would be consistent with the provisions of NARBA and the U.S./Mexican Agreement and would not cause objectionable interference to a duly notified station in Haiti, will be considered and acted upon by the Commission in accordance with its rules and established procedure for action upon such applications. However, in particular cases such applications may also present considerations of an international nature which require that a different procedure be followed. In such cases the procedure to be followed will be determined by the Commission in the light of the special considerations involved.

(b) With respect to applications for facilities which would involve conflict with NARBA only as to a country which has signed but not completed formal ratification of that agreement, and facilities which would cause objectionable interference to a duly notified Haitian station, special provisions of a procedural nature are contained in § 1.570 of this chapter.

(c) Engineering standards now in force domestically differ in some respects from those specified for international purposes. The engineering standards specified for international purposes (in NARBA and the U.S./Mexican Agreement) will be used to determine: (1) The extent to which interference might be caused by a proposed station in the United States to a station in another country of the North American Region; and (2) whether the United States should register an objection to any new or changed assignment notified by another country of the North American Region. The domestic standards in effect in the United States will be used to determine the extent to which interference exists or would exist from a foreign station where the value of such interference enters into a calculation of: (1) The service to be rendered by a proposed operation in the United States; or (2) the permissible interfering signal from one station in the United States to another United States station.

(d) With respect to applications for new Class II-A stations, and other applications accepted for filing before July 13, 1964, the following shall apply: Upon showing that a need exists, a Class II, III, or IV station may be assigned to a channel available for such class, even though interference will be received within its normally protected contour, subject to the following conditions: (1) No objectionable interference will be caused by the proposed station to existing stations or that if interference will be caused, the need for the proposed service outweighs the needs for the service which will be lost by reason of such interference; (2) Primary service will be provided to the community in which the proposed station is to be located; (3) The interference received does not affect more than 10 percent of the population in the proposed station's normally protected primary service area; however, in the event that the nighttime interference received by a proposed Class II or III station would exceed this amount, then an assignment may be made if the proposed station would provide either a standard broadcast nighttime facility to a community not having such a facility or if 25 percent or more of the nighttime primary service area of the proposed station is without primary nighttime service. This subparagraph (3) of this paragraph shall not apply to existing Class IV stations on local channels applying for an increase in power above 250 watts, nor to new Class IV stations proposing power in excess of 250 watts with respect to population in the primary service area outside the equivalent 250 watt, 0.5 mv/m contour.

[28 F.R. 13574, Dec. 14, 1963, as amended at 29 F.R. 9499, July 11, 1964]

§ 73.29 Class IV stations on regional channels.

No license will be granted for the operation of a Class IV station on a regional channel: *Provided, however,* That Class IV stations presently authorized to operate on regional channels will not be required to change frequency, or power but will not be protected against interference from Class III stations.

§ 73.30 Station location and program origination.

(a) (1) Except as provided in paragraph (b) of this section, each standard broadcast station will be licensed to serve primarily a particular city, town, political subdivision, or community which will be specified in the station license and the station will be considered to be located in such place. (2) Unless licensed as a synchronous amplifier transmitter, each station shall maintain a studio, which will be known as the main studio, in the place where the station is located: *Provided*, That the main studio may be located at the transmitter site whether or not the transmitter site is in the place where the station is located. (3) A majority (computed on the basis of duration and not number) of a station's programs, or in the case of a station affiliated with a network two-thirds of such station's nonnetwork programs, whichever is smaller, shall originate from the main studio or from the other studios or remote points situated in the place where the station is located.

(b) (1) Stations will be licensed to serve more than one city, town, political subdivision, or community only where a satisfactory showing is made that each such place meets all the requirements of the rules and regulations of this subpart with respect to the location of main studios; that the station can and will originate a substantial number of local live programs from each such place; and that the requirements as to origination of programs contained in paragraph (a) of this section would place an unreasonable burden on the station if it were licensed to serve only one city, town, political subdivision, or community. (2) A station licensed to serve more than one place shall be considered to be located in and shall maintain main studios in each such place. (3) With respect to such station the requirements as to origination of programs contained in paragraph (a) of this section shall be satisfied by the origination of programs from any or all of the main studios or from other studios and remote points situated in any or all of the places in which the main studios are located.

(c) The transmitter of each standard broadcast station shall be so located that primary service is delivered to the borough or city in which the main studio is located in accordance with the rules and regulations of this subpart.

[33 F.R. 15417, Oct. 17, 1968]

§ 73.31 Authority to move main studio.

The licensee of a station shall not move its main studio outside the borders of the borough or city, state, district, territory, or possession in which it is located, unless such move is to the location of the station's transmitter, without first securing a modification of construction permit or license. The licensee shall promptly notify the Commission of any other change in location of the main studio.

§ 73.32 Special experimental authorizations.

(a) Special experimental authorization may be issued to the licensee of a standard broadcast station in addition to the regular license upon informal application therefor and upon a satisfactory showing in regard to the following, among others:

(1) That the applicant has a program of research and experimentation which indicates reasonable promise of contribution to the development and practical application of broadcasting, and will be in addition to and advancement of the work that can be accomplished under its regular license.

(2) That the experimental operation and experimentation will be under the direct supervision of a qualified engineer with an adequate staff of engineers qualified to carry on the program of research and experimentation.

(3) That the public interest, convenience, and necessity will be served by granting the authorization requested.

(b) In case a special experimental authorization permits additional hours of operation, no licensee shall transmit any commercial or sponsored program or make any commercial announcement during such time of operation. In case of other additional facilities, no additional charge shall be made by reason of transmission with such facilities.

(c) A special experimental authorization will not be extended after the actual experimentation is concluded.

(d) The program of research and experimentation as outlined in the application for a special experimental authorization shall be adhered to in the main unless the licensee is authorized to do otherwise by the Commission.

(e) The Commission may require from time to time a broadcast station holding such experimental authorization to conduct experiments that are deemed desirable and reasonable.

(f) A supplemental report shall be filed with and made a part of each application for an extension of a special experimental authorization and shall include statements of the following:

(1) Comprehensive summary of all research and experimentation conducted.

(2) Conclusions and outline of proposed program for further research and development.

(3) Comprehensive summary and conclusions as to the social and economic effects of its use.

§ 73.33 Antenna systems; showing required.

(a) An application for authority to install a broadcast antenna shall specify a definite site and include full details of the antenna design and expected performance. (Site-to-be-determined applications which were on file prior to October 28, 1953, may be granted conditioned upon the filing within 60 days of such grant of an application for modification of permit specifying a site conforming to Commission's rules and standards.)

(b) All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the license application. If the station is using a directional antenna, a proof of performance must also be filed

§ 73.34 Normal license period.

(a) Initial licenses for standard broadcast stations will ordinarily be issued for a period running until the date specified in this section for the State or territory in which the station is located or, if issued after such date, to the next triennial renewal date determined in accordance with this section; and, when renewed, will normally be renewed for 3 years: *Provided, however*, That, if the Commission finds that the public interest, convenience or necessity will be served thereby, it may issue either an initial license or a renewal thereof for a lesser term. The time of expiration of normally issued initial and renewed licenses will be 3 a.m., local time, on the following dates, and at 3-year intervals thereafter:

(1) For stations located in Iowa and Missouri, February 1, 1968.

(2) For stations located in Minnesota, North Dakota, South Dakota, Montana, and Colorado, April 1, 1968.

(3) For stations located in Kansas, Oklahoma, and Nebraska, June 1, 1968.

(4) For stations located in Texas, August 1, 1968.

(5) For stations located in Wyoming, Nevada, Arizona, Utah, New Mexico, and Idaho, October 1, 1968.

(6) For stations located in California, December 1, 1968.

(7) For stations located in Washington, Oregon, Alaska, Guam, and Hawaii, February 1, 1969.

(8) For stations located in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, April 1, 1969.

(9) For stations located in New Jersey and New York, June 1, 1969.

(10) For stations located in Delaware and Pennsylvania, August 1, 1969.

(11) For stations located in Maryland, District of Columbia, Virginia, and West Virginia, October 1, 1969.

(12) For stations located in North Carolina and South Carolina, December 1, 1969.

(13) For stations located in Florida, Puerto Rico, and Virgin Islands, February 1, 1970.

(14) For stations located in Alabama and Georgia, April 1, 1970.

(15) For stations located in Arkansas, Louisiana, and Mississippi, June 1, 1970.

(16) For stations located in Tennessee, Kentucky, and Indiana, August 1, 1970.

(17) For stations located in Ohio and Michigan, October 1, 1970.

(18) For stations located in Illinois and Wisconsin, December 1, 1970.

NOTE: For the cutoff date for the filing of applications mutually exclusive with, and petitions to deny, renewal applications, see § 1.516(e) of this chapter.

[33 F.R. 4410, Mar. 12, 1968, as amended at 34 F.R. 7967, May 21, 1969]

§ 73.35 Multiple ownership.

No license for a standard broadcast station shall be granted to any party (including all parties under common control) if:

(a) Such party directly or indirectly owns, operates, or controls: one or more standard broadcast stations and the grant of such license will result in any overlap of the predicted or measured 1 mv/m groundwave contours of the existing and proposed stations, computed in accordance with § 73.183 or § 73.186; or one or more television broadcast stations and the grant of such license will result in the predicted or measured 2 mv/m groundwave contour of the proposed station, computed in accordance with § 73.183 or § 73.186, encompassing the entire community of license of one of the television broadcasting stations, or will result in the Grade A contour(s) of the television broadcast station(s), computed in accordance with § 73.684, encompassing the entire community of license of the proposed station; or

(b) Such party, or any stockholder, officer or director of such party, directly or indirectly owns, operates, controls, or has any interest in, or is an officer or director of any other standard broadcast station if the grant of such license would result in a concentration of control of standard broadcasting in a manner inconsistent with public interest, convenience, or necessity. In determining whether there is such a concentration of control, consideration will be given to the facts of each case with particular reference to such factors as the size, extent and location of areas served, the number of people served, classes of stations involved and the extent of other competitive service to the areas in question. The Commission, however, will in any event consider that there would be such a concentration of control contrary to the public interest, convenience or necessity for any party or any of its stockholders, officers or directors to have a direct or indirect interest in, or be stockholders, officers, or directors of, more than seven standard broadcast stations.

NOTE: 1. The word "control" as used herein is not limited to majority stock ownership, but includes actual working control in whatever manner exercised.

NOTE 2: In applying the provisions of paragraph (a) of this section, partial (as well as total) ownership interests in corporate broadcast licensees represented by ownership of voting stock of such corporations will be considered.

NOTE 3: Except as provided in Note 4 of this section, in applying the provisions of paragraphs (a) and (b) of this section to the stockholders of a corporation which has more than 50 voting stockholders, only those stockholders need be considered who are officers or directors or who directly or indirectly own 1 percent or more of the outstanding voting stock.

NOTE 4: In applying the provisions of paragraphs (a) and (b) of this section to the stockholders of a corporation which has more than 50 voting stockholders, an investment company, as defined in 15 U.S.C. section 80a–3 (commonly called a mutual fund), need be considered only if it directly or indirectly owns 3 percent or more of the outstanding voting stock or if officers or directors of the corporation are representatives of the investment company. Holdings by investment companies under common management shall be aggregated.

NOTE 5: In calculating the percentage of ownership of voting stock under the provisions of Note 4, if an investment company directly or indirectly owns voting stock in a company which in turn directly or indirectly owns 50 percent or more of the voting stock of a corporate broadcast licensee, the investment company shall be considered to own the same percentage of outstanding shares of the corporate broadcast station licensee as it owns of the outstanding voting shares of the company standing between it and the licensee corporation. If the intermediate company owns less than 50 percent of the voting stock of a corporate broadcast station licensee, the holding of the investment company need not be considered under the 3-percent rule, but, officers or directors of the licensee corporation who are representatives of the intermediate company shall be deemed to be representatives of the investment company.

NOTE 6: In applying the provisions of paragraphs (a) and (b) of this section to the stockholders of a corporation which has more than 50 voting stockholders, a bank holding stock through its trust department in trust accounts need be considered only if such bank directly or indirectly owns 5 percent or more of the outstanding voting stock: *Provided*, The bank files a disclaimer of intent to control the management or policies of the broadcast corporation. Holdings by banks shall be aggregated if the bank has any right to determine how the stock will be voted.

NOTE 7: In cases where record and beneficial ownership of voting stock of a corporate broadcast station licensee which has more than 50 voting stockholders are not identical, e.g., bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street name for the benefit of customers, trusts holding stock as record owners for the benefit of designated parties, the party having the right to determine how the stock will be voted will be considered to own it for the purposes of these rules.

NOTE 8: Paragraph (a) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities. Said paragraph will not apply to applications for increased power for Class IV stations; to applications for assignment of license or transfer of control filed in accordance with § 1.540(b) or § 1.541(b) of this chapter, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy if no new or increased overlap would be created between commonly owned, operated, or controlled standard broadcast stations and if no new encompassment of communities proscribed in paragraph (a) of this section as to commonly owned, operated, or controlled standard broadcast stations and television broadcast stations would result. Said paragraph will apply to all applications for new stations, to all other applications for assignment or transfer, and to all applications for major changes in existing stations except major changes that will result in overlap of contours of standard broadcast stations with each other no greater than that already existing. (The resulting areas of overlap of contours of standard broadcast stations with each other in such major change cases may consist partly or entirely of new terrain. However, if the population in the resulting overlap areas substantially exceeds that in the previously existing overlap areas, the Commission will not grant the application if it finds that to do so would be against the public interest, convenience, and necessity.) Paragraph (a) of this section will not apply to any application by a party who directly or indirectly owns, operates or controls a UHF television broadcast station where grant of such application would result in the Grade A contour of the UHF station encompassing the entire community of license of a commonly owned, operated, or controlled standard broadcast station or would result in the entire community of license of such UHF station being encompassed by the 2 mv/m contour of such standard broadcast station. Such community encompassment cases will be handled on a case-by-case basis in order to determine whether common ownership, operation, or control of the stations in question would be in the public interest. Commonly owned, operated, or controlled broadcast stations, with overlapping contours or with community-encompassing contours prohibited by paragraph (a) of this section may not be assigned or transferred to a single person, group, or entity, except as provided above in this note.

NOTE 9: Paragraph (a) of this section will not be applied to cases involving television stations which are primarily "satellite" operations. Such cases will be considered on a case-by-case basis in order to determine whether common ownership, operation, or control of the stations in question would be in the public interest. Whether or not a particular television broadcast station which does not present a substantial amount of locally originated programing is primarily a "satellite" operation will be determined on the facts of the particular case. An authorized and operating "satellite" television station the Grade A contour of which completely encompasses the community of license of a commonly owned, operated, or controlled standard broadcast station, or the community of license which is completely encompassed by the 2 mv/m contour of such a standard broadcast station may subsequently become a "non-satellite" station with local studios and locally originated programing. However, such commonly owned, operated, or controlled standard and "non-satellite" television stations may not be transferred or assigned to a single person, group, or entity except as provided in Note 7.

[28 F.R. 13574, Dec. 14, 1963, as amended at 29 F.R. 7539, June 12, 1964; 33 F.R. 9084, June 26, 1968; 36 F.R. 4289, Mar. 4, 1971; 37 F.R. 9777, May 17, 1972]

§ 73.36 Special field test authorization.

(a) Upon a showing that a need exists, a special test authorization to operate a portable or regularly authorized transmitter may be issued to persons desiring to make field intensity surveys to determine values of soil conductivity, or other factors influencing radio wave propagation, in particular areas or paths for the period necessary to conduct the survey. Such authorizations may be granted upon the following conditions:

(1) No objectionable interference will result to the operation of other authorized radio services; in this connection, the power requested shall not exceed that necessary for the purposes of the test.

(2) The carrier will be unmodulated except for half-hourly voice identification.

(3) The plate power (E_p x I_p) of the final stage of the transmitter shall not exceed authorized test power and the antenna current shall be maintained at a constant value for each phase of the test.

(4) The test equipment shall not be permanently installed, unless such installation has been separately authorized. Mobile units shall not be deemed permanent installations.

(5) The equipment must be operated by or under the personal direction of either a licensed radiotelephone first-class or second-class operator.

(6) A report, under oath, containing the measurements, their analysis and other results of the survey shall be filed with the Commission within sixty (60) days from the termination of the test authorization. The measurements taken shall be sufficiently complete, in accordance with § 73.186, so as to permit a determination of the inverse distance field at 1 mile in pertinent directions.

(7) The plate voltage (E_p) and plate current (I_p) of the final stage of the transmitter shall be logged at half-hour intervals and at any time that such

power is changed. Certified copies of such log notations shall be submitted to the Commission with the required report.

(8) Operation shall conform to the requirements of Subpart G of this part.

(b) The test equipment, installation and operation thereof need not comply with the requirements of Commission rules and standards except as specified in this section: *Provided however*, That the equipment, installation and operation shall be consistent with good engineering principles and practices.

(c) No authorization shall be issued unless the applicant for such authorization is determined to be legally qualified. Requests for authorizations to operate a transmitter under this section shall be made in writing, signed by the applicant (with no special form provided, however), and shall set forth the following information:

(1) Purpose, duration and need for the survey.

(2) Frequency, plate power and time of operation.

(3) A brief description of the test antenna system and its estimated effective field and its proposed location.

(4) In the case of a directional test antenna, an estimate of the maximum fields expected to be radiated in the direction of pertinent broadcast stations.

(5) In the case of a person who is not a licensee or permittee of this Commission the information required by section II of FCC Form 301.

(d) The authorization may be modified or terminated by notification from the Commission if in its judgment such action will promote the public interest, convenience or necessity.

[28 F.R. 13574, Dec. 14, 1963, as amened at 30 F.R. 14556, Nov. 23, 1965]

§ 73.37 Minimum separation between stations; prohibited overlap.

(a) Except as indicated in other paragraphs of this section, and except for Class II–A stations, no application will be accepted for a new station (or change in frequency) if the proposed operation would involve overlap of signal strength contours with any other station as set forth below in this paragraph; and no application will be accepted for a change (other than a change in frequency) of the facilities of an existing station (including the daytime facilities of an existing Class II–A station) if the proposed change would involve such overlap in any area where there is not already such overlap between the stations involved:

Frequency separation	Contour of proposed new station (Classes II-B, II-D, III, and IV)	Contour of any other station
	mv/m	
Co-channel	0.005	0.1 mv/m (Class I).
	0.025	0.5 mv/m (Other classes).
	0.5	0.025 mv/m (All classes).
10 kc/s	0.5	0.5 mv/m (All classes).
20kc/s	2	25 mv/m (All classes).
	25	2 mv/m (All classes).
30 kc/s	25	25 mv/m (All classes).

(b) An application for a new daytime station or a change in the daytime facilities of an existing station may be granted notwithstanding overlap of the proposed 0.5 mv/m contour and the 0.025 mv/m contour of another co-channel station, where the applicant station is or would be the first standard broadcast facility in a community of any size wholly outside of an urbanized area (as defined by the latest U.S. Census), or the first standard broadcast facility in a community of 25,000 or more population wholly or partly within an urbanized area, or when the facilities proposed would provide a first primary service to at least 25 percent of the interference-free area within the proposed 0.5 mv/m contour: *Provided*, That:

(1) The proposal complies with paragraph (a) of this section in all other respects and is consistent with all other provisions of this part; and

(2) No overlap would occur between the 1 mv/m contour of the proposed facilities and the 0.05 mv/m contour of any co-channel station.

(c) In determining overlap received, an application for a new Class IV station with daytime power of 250 watts, or greater, shall be considered on the assumption that both the proposed operation and all existing Class IV stations operate with 250 watts and utilize nondirectional antennas. With respect to applications for new Class IV facilities, the provisions of paragraph (b) of this section shall be applied using the assumption mentioned in this paragraph for determining overlap received.

(d) If otherwise consistent with the public interest and subject to section 316 of the Communications Act, an application requesting an increase in the daytime power of an existing Class IV station on a local channel from 250 watts to a maximum of one kilowatt, or from 100 watts to a maximum of 500 watts, may be granted notwithstanding overlap prohibited by paragraph (a) of this section. In the case of a 100 watt Class IV station increasing daytime power, the provisions of this paragraph shall not be construed to permit an increase in power to more than 500 watts, if prohibited overlap would be involved, even if successive applications should be tendered.

NOTE 1: The foregoing provisions of this section shall not be applied to applications for new Class II–A stations or to applications accepted for filing before July 1, 1964. With respect to such applications, the following shall apply: An authorization will not be granted for a station on a frequency of ±30 kc/s from that of another station if the area enclosed by the 25 mv/m groundwave contours of the two stations overlap, nor will an authorization be granted for the operation of a station on a frequency ±20 kc/s or ±10 kc/s from the frequency of another station if the area enclosed by the 25 mv/m groundwave contour of either one overlaps the area enclosed by the 2 mv/m groundwave contour of the other. (As to overlap with Class II–A stations, see § 73.21, Note 2.)

NOTE 2: In the case of applications for changes (other than frequency) in the facilities of standard broadcast stations covered by this section, an application therefor will be accepted even though overlap of signal strength contours as mentioned in this section would occur with another station in an area where such overlap does not already exist, if: (1) The total area of overlap with that station would not be increased; (2) there would be no net increase in the area of overlap with any other station; and (3) there would be created no area of overlap with any station with which overlap does not now exist.

NOTE 3: The provisions of this section concerning prohibited overlap of signal strength contours will not apply where: (1) the area of such overlap lies entirely over sea water; or (2) the only overlap involved would be that caused to a foreign station, in which case the provisions of the North American Regional Broadcasting Agreement (NARBA) and the U.S./Mexican Agreement will apply. Where overlap would be received from a foreign station, the provisions of this section will apply.

[29 F.R. 9499, July 11, 1964, as amended at 30 F.R. 3541, May 17, 1965; 33 F.R. 4410, Mar. 12, 1968]

§ 73.38 Limited time operation.

(a) Starting November 30, 1959, no authorization will be granted for:

(1) A new limited time station;

(2) A limited time station operating on a changed frequency;

(3) A limited time station with a new transmitter site materially closer to the 0.1 mv/m contour of a co-channel U.S. Class I station; or

(4) Modification of the operating facilities of a limited time station resulting in increased radiation toward any point on the 0.1 mv/m contour of a co-channel U.S. Class I station, during the hours after local sunset in which the limited time station is permitted to operate by reason of location east of the Class I station.

EQUIPMENT

§ 73.39 Indicating instruments—specifications.

(a) Instruments indicating the plate current or plate voltage of the last radio stage (linear scale instruments) shall meet the following specifications:

(1) Length of scale shall be not less than $2\frac{3}{16}$ inches.

(2) Accuracy shall be at least 2 percent of the full scale reading.

(3) The maximum rating of the meter shall be such that it does not read off scale during modulation.

(4) Scale shall have at least 40 divisions.

(5) Full scale reading shall not be greater than five times the minimum normal indication.

(b) Instruments indicating antenna current, common point current, and base currents shall meet the following specifications:

(1) Instruments having logarithmic or square law scales.

(i) Shall meet same requirements as paragraph (a) (1), (2) and (3) of this section for linear scale instruments.

(ii) Full scale reading shall not be greater than three times the minimum normal indication.

(iii) No scale division above one-third full scale reading (in amperes) shall be greater than one-thirtieth of the full scale reading. (Example: An ammeter meeting requirement (i) having full scale reading of 6 amperes is acceptable for reading currents from 2 to 6 amperes, provided no scale division between 2 and 6 amperes is greater than one-thirtieth of 6 amperes, 0.2 ampere.)

(2) Radio frequency instruments having expanded scales.

(i) These instruments shall meet same requirements as paragraph (a) (1), (2), and (3) of this section for linear scale instruments.

(ii) Full scale reading shall not be greater than five times the minimum normal indication.

(iii) No scale division above one-fifth full scale reading (in amperes) shall be greater than one-fiftieth of the full scale reading. (Example: An ammeter meeting the requirement (i) is acceptable for indicating currents from 1 to 5 amperes, provided no division between 1 and 5 amperes is greater than one-fiftieth of 5 amperes, 0.1 ampere.)

(iv) Manufacturers of instruments of the expanded scale type must submit data to the Commission showing that these instruments have acceptable expanded scales, and the type number of these instruments must include suitable designation.

(c) A thermocouple type ammeter meeting the requirements of paragraph (b) of this section shall be permanently installed in the antenna circuit or a suitable jack and plug arrangement may be made to permit removal of the meter from the antenna circuit so as to protect it from damage by lightning. Where a jack and plug arrangement is used, contacts shall be made of silver and capable of operating without arcing or heating, and shall be protected against corrosion. Insertion and removal of the meter shall not interrupt the transmissions of the station. When removed from the antenna circuit. the meter shall be stored in a suitable housing at the base of the tower in which it is used. Care shall be exercised in handling the meter to prevent damage which would impair its accuracy. Where the meter is permanently connected in the antenna circuit, provision may be made to short or open the meter circuit when it is not being used to measure antenna current. Such switching shall be accomplished without interrupting the transmissions of the station.

(d) Remote reading antenna ammeter(s) may be employed and the indications logged as the antenna current, or in the case of directional antenna, the common point current and base currents, in accordance with the following:

(1) Remote reading antenna, common point or base ammeters may be provided by:

(i) Inserting second thermocouple directly in the antenna circuit with remote leads to the indicating instrument.

(ii) Inductive coupling to thermocouple or other device for providing direct current to indicating instrument.

(iii) Capacity coupling to thermocouple or other device for providing direct current to indicating instrument.

(iv) Current transformer connected to second thermocouple or other device for providing direct current to indicating instrument.

(v) Using transmission line current meter at transmitter as remote reading ammeter. See subparagraph (7) of this paragraph.

(vi) Using indications of phase monitor for determining the antenna base currents or their ratio in the case of directional antennas, provided that the base current readings are read and logged in accordance with the provision of the station license, and provided further that the indicating instruments in the unit are connected directly in the current sampling circuits with no other shunt circuits of any nature. The meters in the phase monitor may utilize arbitrary scale divisions provided a calibration curve showing the relationship between the arbitrary scale and the scale of the base meters is maintained at the transmitter location.

(vii) Using indications of remote control equipment provided that the indicating instruments are capable of being connected directly into the antenna circuit at the same point as, but below (transmitter side), the antenna ammeter. The meter(s) in the remote control equipment may utilize an arbitrary scale division provided a calibration curve showing the relationship between the arbitrary scale and the scale of the antenna ammeter is maintained at the remote control point. The meter(s) in the remote control equipment must be calibrated once a week against the regular meter and the results thereof entered in the operating log.

(2) Remote ammeters shall be connected into the antenna circuit at the same point as, but below (transmitter side), the antenna ammeter(s), and shall be calibrated to indicate within 2 percent of the regular meter over the entire range above one-third or one-fifth full scale. See paragraphs (b) (1) (i), (iii) and (b) (2) (i), (iii) of this section.

(3) The regular antenna ammeter, common point ammeter, or base current ammeters shall be above (antenna side) the coupling to the remote meters in the antenna circuit so they do not read the current to ground through the remote meter(s).

(4) All remote meters shall meet the same requirements as the regular antenna ammeter with respect to scale accuracy, etc.

(5) Calibration shall be checked against the regular meter at least once a week.

(6) All remote meters shall be provided with shielding or filters as necessary to prevent any feed-back from the antenna to the transmitter.

(7) In the case of shunt excited antennas, the transmission line current meter at the transmitter may be considered as the remote antenna ammeter provided the transmission line is terminated directly into the excitation circuit feed line, which shall employ series tuning only (no shunt circuits of any type shall be employed) and insofar as practicable, the type and scale of the transmission line meter should be the same as those of the excitation circuit feed line meter (meter in slant wire feed line or equivalent).

(8) Remote reading antenna ammeters employing vacuum tube rectifiers or semi-conductor devices are acceptable, provided:

(i) The indicating instruments shall meet all the above requirements for linear scale instruments.

(ii) Data are submitted under oath showing the unit has an over-all accuracy of at least 2 percent of the full scale reading.

(iii) The installation, calibration, and checking are in accordance with the requirements of this paragraph.

(9) In the event there is any question as to the method of providing the remote indication, or the accuracy of the remote meter, the burden of proof of satisfactory performance shall be upon the licensee and the manufacturer of the equipment.

(e) [Reserved]

(f) No instrument, the seal of which has been broken, or the accuracy of which is questionable, shall be employed. Any instrument which was not originally sealed by the manufacturer that has been opened shall not be used until it has been recalibrated and sealed in accordance with the following: Repairs and recalibration of instruments shall be made by the manufacturer, by an authorized instrument repair service of the manufacturer, or by some other properly qualified and equipped instrument repair service. In any event, the instrument must be resealed with the symbol or trademark of the repair service and a certificate of calibration supplied therewith.

(g) Since it is usually impractical to measure the actual antenna current of a shunt excited antenna system, the current measured at the input of the excitation circuit feed line is accepted as the antenna current.

(h) [Reserved]

(i) The function of each instrument shall be clearly and permanently shown on the instrument itself or on the panel immediately adjacent thereto.

(j) Digital meters, printers, or other numerical readout devices may be used in addition to or in lieu of indicating instruments meeting the specifications of paragraphs (a) and (b) of this section. If a single digital device is used at the transmitter for reading and logging of operating parameters, either (1) indicating instruments meeting the above-mentioned specifications shall be installed in the transmitter and antenna circuit, or (2) a spare digital device shall be maintained at the transmitter with provision for its rapid substitution for the main device should that device malfunction. The readout of the device shall include at least three digits and shall indicate the value or a decimal multiple of the value of the parameter being read to an accuracy of at least 2 percent. The multiplier to be applied to the reading of each parameter shall be indicated at the operating position of a switch used to select the parameter for display, or on the face of an automatically printed log at least once for each calendar day.

[28 F.R. 13574, Dec. 14, 1963, as amended at 32 F.R. 13511, Sept. 27, 1967; 33 F.R. 15417, Oct. 17, 1968; 34 F.R. 18304, Nov. 15, 1969]

§ 73.40 Transmitter; design, construction, and safety of life requirements.

(a) *Design*. The general design of standard broadcast transmitting equipment [main studio microphone (including telephone lines, if used, as to performance only) to antenna output] shall be in accordance with the following specifications. (In cases where telephone lines are not available to give the performance as required in these specifications a relay transmitter may be authorized to supersede the lines.) For the points not specifically covered in this paragraph, the principles set out shall be followed. The equipment shall be so designed that:

(1) The maximum rated carrier power (determined by § 73.42) is in accordance with the requirements of § 73.41.

(2) The equipment is capable of satisfactory operation at the authorized operating power or the proposed operating power with modulation of at least 85 to 95 percent with no more distortion than given in subparagraph (3) of this paragraph.

(3) The total audio frequency distortion from microphone terminals, including microphone amplifier, to antenna output does not exceed 5 percent harmonics (voltage measurements of arithmetical sum or r.s.s.) when modulated from 0 to 84 percent, and not over 7.5 percent harmonics (voltage measurements of arithmetical sum or r.s.s.) when modulating 85 percent to 95 percent (distortion shall be measured with modulating frequencies of 50, 100, 400, 1000, 5000, and 7500 cycles per second (c/s) up to tenth harmonic or 16000 c/s, or any intermediate frequency that readings on these frequencies indicate is desirable).

(4) The audio frequency transmitting characteristics of the equipment from the microphone terminals (including microphone amplifier unless microphone frequency correction is included in which event proper allowance shall be made accordingly) to the antenna output does not depart more than 2 decibels from that at 1000 cycles between 100 and 5000 cycles.

(5) The carrier shift (current) at any percentage of modulation does not exceed 5 percent.

(6) The carrier hum and extraneous noise level, unweighted r.s.s. (exclusive of microphone and studio noises) over the frequency band 30 to 20,000 c/s is at least 45 db below the level of a sinusoidal tone of a 400 c/s, producing 100 percent modulation of the carrier.

(7) The transmitter shall be equipped with suitable indicating instruments in accordance with the requirements of § 73.58 and any other instruments necessary for the proper adjustment and operation of the equipment.

(8) Adequate provision is made for varying the transmitter power output between sufficient limits to compensate for excessive variations in line voltage, or other factors which may affect the power output.

(9) The transmitter is equipped with automatic frequency control equipment capable of maintaining the operating frequency within the limit specified by § 73.59.

(i) The maximum temperature variation at the crystal from the normal operating temperature shall not be greater than,

Plus or minus 0.1° C. when an *X* or *Y* cut crystal is employed, or

Plus or minus 1.0° C. when low temperature coefficient crystal is employed.

(ii) Unless otherwise authorized, a thermometer shall be installed in such manner that the temperature at the crystal can be accurately measured within 0.05° C. for *X* or *Y* cut crystal or 0.5° for low temperature coefficient crystal.

(iii) It is preferable that the tank circuit of the oscillator tube be installed in the temperature controlled chamber.

Note: Explanations of excessive frequency deviations will not be accepted when temperature variations are in excess of the values specified.

(10) Means are provided for connection and continuous operation of approved modulation monitor and approved frequency monitor. The radio frequency energy for operation of the approved frequency monitor shall be obtained from a radio-frequency stage prior to the modulated stage unless the monitor is of such design as to permit satisfactory operation when otherwise connected and the monitor circuits shall be such that the carrier is not heterodyned thereby.

(11) Adequate margin is provided in all component parts to avoid overheating at the maximum rated power output.

(12) Any emission appearing on a frequency removed from the carrier by between 15 kc/s and 30 kc/s, inclusive, shall be attenuated at least 25 db below the level of the unmodulated carrier. Compliance with the specification will be deemed to show the occupied bandwidth to be 30 kc/s or less.

(13) Any emission appearing on a frequency removed from the carrier by more than 30 kc/s and up to and including 75 kc/s, inclusive, shall be attenuated at least 35 db below the level of the unmodulated carrier.

(14) Any emission appearing on a frequency removed from the carrier by more than 75 kc/s shall be attenuated at least $43 + 10 \log_{10}$ (Power, in watts) decibels below the level of the unmodulated carrier, or 80 decibels, whichever is the lesser attenuation.

(b) *Construction*. In general, the transmitter shall be constructed either on racks and panels or in totally enclosed frames protected as required by the provisions of the National Electrical Code concerning transmitting equipment at radio and television stations.

NOTE: The final stages of high power transmitters may be assembled in open frames provided the equipment is enclosed by a protective fence.

(1) Means shall be provided for making all tuning adjustments, requiring voltages in excess of 350 volts to be applied to the circuit, from the front of the panels with all access doors closed.

(2) Proper bleeder resistors or other automatic means shall be installed across all the condenser banks to remove any charge which may remain after the high voltage circuit is opened (in certain instances the plate circuit of the tubes may provide such protection; however, individual approval of such shall be obtained by the manufacturer in case of standard equipment, and the licensee in case of composite equipment).

(3) All plate supply and other high voltage equipment, including transformers, filters, rectifiers and motor generators, shall be protected so as to prevent injury to operating personnel.

(i) Commutator guards shall be provided on all high voltage rotating machinery (coupling guards on motor generators, although desirable, are not required).

(ii) Power equipment and control panels of the transmitter shall meet the above requirements (exposed 220 volt AC switching equipment on the front of the power control panels is not recommended; however, it is not prohibited).

(iii) Power equipment located at a broadcast station but not directly associated with the transmitter (not purchased as part of same), such as power distribution panels, control equipment on indoor or outdoor stations and the substations associated therewith, are not under the jurisdiction of the Commission; therefore, § 73.46 does not apply.

(iv) It is not necessary to protect the equipment in the antenna tuning house and the base of the antenna with screens and interlocks, provided the doors to the tuning house and antenna base are fenced and locked at all times, with the keys in the possession of the operator on duty at the transmitter. Ungrounded fencing or wires should be effectively grounded, either directly or through proper static leaks. Lightning protection for the antenna system is not specifically required but should be installed.

(v) The antenna, antenna lead-in, counterpoise (if used), etc., shall be installed so as not to present a hazard. The antenna may be located close by or at a distance from the transmitter building. A properly designed and terminated transmission line should be used between the transmitter and the antenna when located at a distance.

(4) Metering equipment. (In addition to the following requirements, instruments shall meet the requirements of §§ 73.39 and 73.58.)

(i) All instruments having more than 1,000 volts potential to ground on the movement shall be protected by a cage or cover in addition to the regular case. (Some instruments are designed by the manufacturer to operate safely with voltages in excess of 1,000 volts on the movement. If it can be shown by the manufacturer's rating that the instrument will operate safely at the applied potential, additional protection is not necessary.)

(ii) In case the plate voltmeter is located on the low potential side of the multiplier resistor with one terminal of the instrument at or less than 1,000 volts above ground, no protective case is required. However, it is good practice to protect voltmeters subject to more than 5,000 volts with suitable over-voltage protective devices across the instrument terminals in case the winding opens.

(iii) The antenna ammeters (both regular and remote) and any other radio frequency instrument which it is necessary for the operator to read shall be so installed as to be easily and accurately read without the operator having to risk contact with circuits carrying high potential radio frequency energy.

(c) *Wiring and shielding*. (1) The transmitter panels or units shall be wired in accordance with standard switchboard practice, either with insulated leads properly cabled and supported or with rigid bus bar properly insulated and protected.

(2) Wiring between units of the transmitter, with the exception of circuits carrying radio frequency energy, shall be installed in conduits or approved fiber or metal raceways to protect it from mechanical injury.

(3) Circuits carrying low level radio frequency energy between units shall be

either concentric tube, two wire balanced lines, or properly shielded to prevent the pickup of modulated radio frequency energy from the output circuits.

(4) Each stage (including the oscillator) preceding the modulated stage shall be properly shielded and filtered to prevent unintentional feedback from any circuit following the modulated stage (an exception to this requirement may be made in the case of high level modulated transmitters of approved manufacture which have been properly engineered to prevent reaction).

(5) The crystal chamber, together with the conductor or conductors to the oscillator circuit shall be totally shielded.

(6) The monitors and the radio frequency lines to the transmitter shall be thoroughly shielded.

(d) *Installation.* (1) The installation shall be made in suitable quarters.

(2) Since an operator must be on duty at the transmitter control point during operation, suitable facilities for his welfare and comfort shall be provided at the control point.

(e) [Reserved]

(f) *Studio equipment.* (1) The studio equipment shall be subject to all the above requirements where applicable except as follows:

(i) If it is properly covered by an underwriter's certificate, it will be considered as satisfying the safety requirements.

(ii) The pertinent provisions of the National Electrical Code concerning transmitting equipment at radio and television stations shall apply for voltages only when in excess of 500 volts.

(2) No specific requirements are made relative to the design and acoustical treatment. However, the studios and particularly the main studio should be in accordance with the standard practice for the class of station concerned, keeping the noise level as low as reasonably possible.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 15417, Oct. 17, 1968; 34 F.R. 11359, July 9, 1969]

§ 73.41 Maximum rated carrier power; tolerances.

The maximum rated carrier power of a transmitter shall be an even power step as recognized by the Commission's plan of allocation (250 watts, 500 watts, 1 kw., 5 kw., 10 kw., 25 kw., 50 kw.) and shall not be less than the authorized power nor shall it be greater than the value specified in the following table:

Class of station	Maximum power authorized to station	Maximum rated carrier power permitted to be installed
Class IV	250,500 or 1,000 watts	1,000
Class III	500 or 1,000 watts	1,000
	5,000 watts	5,000
Class II	250, 500, or 1,000 watts	1,000
	5,000 or 10,000 watts	10,000
	25,000 or 50,000 watts	50,000
Class I	10,000 watts	10,000
	25,000 or 50,000 watts	50,000

[31 F.R. 8068, June 8, 1966]

§ 73.42 Maximum rated carrier power; how determined.

The maximum rated carrier power of a standard broadcast transmitter shall be determined as the sum of the applicable power ratings of the vacuum tubes employed in the last radio stage.

§ 73.43 Changes in equipment; authority for.

No licensee or permittee shall change, in the last radio stage, the number of vacuum tubes, nor change to vacuum tubes of different power rating or class of operation, nor shall it change the system of modulation, without authority of the Commission.

§ 73.44 Other changes in equipment.

Other changes except as provided for in this subpart which do not affect the maximum power rating or operating power of the transmitter or the operation or precision of the frequency control equipment may be made at any time without authority of the Commission, but in the next succeeding application for renewal of license such changes which affect the information already on file shall be shown in full.

§ 73.45 Radiating system.

(a) All applicants for new, additional, or different broadcast facilities and all licensees requesting authority to change the transmitter site of an existing station shall specify a radiating system the efficiency of which complies with the requirements of good engineering practice for the class and power of the station. (See §§ 73.186 and 73.189.)

(b) No broadcast station licensee or permittee shall change the physical height of the transmitting antenna, or supporting structures, or make any changes in the radiating system which will measurably alter the radiation patterns, except upon application to and authority from the Commission.

(c) Should any changes occur which would alter the resistance of the antenna system, the licensee shall immediately make a new determination of the antenna resistance (see § 73.54) and shall submit application for authority to determine power by the direct method on the basis of the new measurements. In this connection, see §§ 73.316(g) and 73.685(h).

(d) The antenna and/or supporting structure shall be painted and illuminated in accordance with the specifications supplied by the Commission pursuant to section 303(q) of the Communications Act of 1934 as amended. (See Part 17 of this chapter, Construction, Marking, and Lighting of Antenna Structures.)

(e) The simultaneous use of a common antenna or antenna structure by more than one standard broadcast station, or by one or more standard broadcast stations and one or more stations of any other class or service may be authorized provided:

(1) Complete verified engineering data are submitted showing that satisfactory operation of each station will be obtained without adversely affecting the operation of the other station.

(2) The minimum antenna height or field intensity for each standard broadcast station concerned complies with paragraph (a) of this section.

(f) If a common tower is used for antenna and/or antenna supporting purposes by two or more licensees or permittees of standard broadcast stations or by one or more such licensees or permittees and one or more licensees or permittees of any other class or service, each permittee or licensee shall be responsible for painting and illuminating the structure when obstruction marking and lighting are required by the Commission.

[28 F.R. 13574, Dec. 14, 1963, as amended at 30 F.R. 11860, Sept. 16, 1965]

§ 73.46 Transmitter.

(a) The transmitter proper and associated transmitting equipment of each broadcast station shall be designed, constructed, and operated in accordance with good engineering practice in all phases not otherwise specifically included in the regulations in this subpart.

(b) The transmitter shall be wired and shielded in accordance with good engineering practice and shall be provided with safety features in accordance with the specifications concerning transmitting equipment at radio and television stations contained in the current National Electrical Code as approved by the American Standards Association.

(c) The station equipment shall be so operated, tuned, and adjusted that emissions outside of the authorized channel do not cause harmful interference to the reception of other radio stations. Standard broadcast stations employing radio transmitters type accepted after January 1, 1960, shall maintain the bandwidth occupied by their emissions in accordance with the specifications set forth in § 73.40(a). Stations employing transmitters installed or type accepted prior to January 1, 1960, shall achieve the highest degree of compliance practicable with their existing equipment. In either case, should harmful interference to the reception of other radio stations occur, the licensee may be required to take such further steps as may be necessary to eliminate the interference.

(d) The audio distortion, audio frequency response, carrier hum, noise level, and other essential phases of the operation which control the external effects shall at all times conform to the requirements of good engineering practice.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 15418, Oct. 17, 1968]

§ 73.47 Equipment performance measurements.

(a) The licensee of each standard broadcast station shall make equipment performance measurements of authorized main and alternate main transmitters at least once each calendar year: *Provided, however,* That the dates of completion of successive sets of measurements shall be no more than fourteen months apart. One set of equipment performance measurements shall be made during the four-month period preceding the filing date of the application for renewal of station license. If the same transmitter is authorized for more than one mode of operation, equipment performance measurements of this transmitter need be made only at the highest authorized power level. Equipment performance measurements for auxiliary transmitters are not required. Equipment performance measurements shall be made with equipment adjusted for normal program operation, and shall include all circuits between the main studio amplifier input and antenna output, including equalizer or correction circuits normally employed, but without compression if such amplifier is employed. The measurement program shall yield the following information:

(1) Data and curves showing overall audiofrequency response from 50 to 7,500 cycles per second (c/s) for approximately 25, 50, 85, and 100 (if obtainable) percent modulation. Family of curves should be plotted (one for each percentage above) with db above and below a reference frequency of 1,000 c/s as ordinate and audiofrequency as abscissa.

(2) Data and curves showing audio frequency harmonic content for 25, 50, 85, and 100 (if obtainable) percent modulation for fundamental frequencies of 50, 100, 400, 1000, 5000, and 7500 c/s (either arithmetical or root sum square values up to the 10th harmonic or 16,000 c/s). Plot family of curves (one for each percentage above) with percent distortion as ordinate and audio frequency as abscissa.

(3) Data showing percentage carrier shift for 25, 50, 85, and 100 percent modulation with 400 c/s tone.

(4) The carrier hum and extraneous noise level generated within the equipment, and measured throughout the audio spectrum, or by bands, referred to the level for 100 percent modulation of the carrier by a sinusoidal tone with a frequency of 400 c/s.

(5) Measurements or evidence showing that spurious radiations including radio frequency harmonics are suppressed or are not present to a degree capable of causing objectionable interference to other radio services. Field intensity measurements are preferred but observations made with a communications type receiver may be accepted. However, in particular cases involving interference or controversy, the Commission may require actual measurements.

(b) The data required by paragraph (a) of this section together with a description of instruments and procedure, signed by the engineer making the measurements, shall be kept on file at the transmitter and retained for a period of two years and on request shall be made available during that time to any duly authorized representative of the Federal Communications Commission.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 4410, Mar. 12, 1968; 33 F.R. 11541, Aug. 14, 1968; 33 F.R. 15418, Oct. 17, 1968; 34 F.R. 11359, July 9, 1969]

§ 73.48 Acceptability of broadcast transmitters for licensing.

(a) In order to facilitate the filing of and action on applications for station authorizations, transmitters will be accepted for licensing by the Commission under one of the following conditions:

(1) A transmitter may be type accepted upon the request of any manufacturer of transmitters by following the type acceptance procedure set forth in Part 2 of this chapter, provided that the data and information submitted indicate that the transmitter meets the requirements of § 73.40. If accepted, such transmitter will be included on the Commission's "Radio Equipment List." Applicants specifying transmitters included on such a list need not submit detailed descriptions and diagrams where the correct type number is specified, provided that the equipment proposed is identical with that accepted. Copies of this list are available for inspection at the Commission's office in Washington, D.C., and at each of its field offices.

(2) An application specifying a transmitter not included on the Radio Equipment List may be accepted upon the request of a prospective licensee submitting with the application for construction permit a complete description of the transmitter, including the circuit diagram, listing of all tubes used, function of each, multiplication in each stage, plate current and voltage applied to each tube, a description of the oscillator circuit together with any devices installed for the purpose of frequency stabilization and the means of varying output power to compensate for power supply voltage variations. However, if this data has been filed with the Commission by a manufacturer in connection with a request for type acceptance, it need not be submitted with the application for construction permit but may be referred to as "on file". Measurement data for type acceptance made in accordance with subparagraph (1) of this paragraph shall be submitted with the license application.

(3) A transmitter shown on an instrument of authorization by manufacturer and type number, or as a composite, and which was in use prior to June 30, 1955, may continue to be used by the licensee, his successors or assignees,

provided such transmitter continues to comply with the rules and regulations.

(4) A permittee may, without further authority, install a transmitter other than that specifically authorized in its construction permit if such transmitter is listed in the Commission's "Radio Equipment List" as accepted for the power authorized.

(5) A licensee may, without further authority, install and utilize a transmitter other than that specifically authorized in its station license if the transmitter so installed and utilized is listed in the Commission's "Radio Equipment List, Part B, Aural Broadcast Equipment" as accepted for the power authorized if the Commission and the Engineer in Charge of the radio district in which the station is located are notified within 3 days after the date of installation of the transmitter. Such notice shall include the make and type number of the transmitter and a certification by the licensee that the transmitter as installed complies with the appropriate technical provisions of this subpart.

(b) Additional rules with respect to withdrawal of type-acceptance, modification of type-accepted equipment and limitations on the findings upon which type acceptance is based are set forth in Part 2 of this chapter.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 15418, Oct. 17, 1968]

§ 73.49 Requirements for approval of frequency monitors.

(a) *General requirements.* (1) Any manufacturer desiring to submit a monitor for type approval shall supply the Commission with full specification details (two sworn copies) as well as the test data specified in paragraph (c) of this section. If this information appears to meet the requirements of the rules, shipping instructions will be issued to the manufacturer. The shipping charges to and from the Laboratory at Laurel, Maryland, shall be paid for by the manufacturer. Approval of a monitor will only be given on the basis of the data obtained from the sample monitor submitted to the Commission for test.

(2) In approving a monitor upon the basis of the tests conducted by the Laboratory, the Commission merely recognizes that the type of monitor has the inherent capability of functioning in compliance with the rules, if properly constructed, maintained, and operated. The Commission realizes that the frequency monitor may have limited range over which the visual indicator will determine deviations. Accordingly, it may be necessary that adjunct equipment be used to determine major deviations.

NOTE: In addition to the visual indicator, the range of which may be limited in order to obtain the required accuracy, an aural indicator should also be employed to indicate frequency deviations beyond the range of the visual indicator, particularly where the visual indicator is so designed that the indication becomes zero when the deviations become considerably greater than the range of the instrument.

(3) Additional rules with respect to withdrawal of type approval, modification of type approval equipment and limitations on the findings upon which type approval is based are set forth in Part 2, Subpart F, of this chapter.

(b) *General specifications.* The general specifications that frequency monitors shall meet before they will be approved by the Commission are as follows:

(1) The unit shall have an accuracy of at least five parts per million under ordinary conditions (temperature, humidity, power supply, and other conditions which may affect its accuracy) encountered in standard broadcast stations throughout the United States.

(2) The range of the indicating device shall be at least from 20 cycles below to 20 cycles above the assigned frequency.

(3) The scale of the indicating device shall be so calibrated as to be accurately read within at least 1 cycle.

(4)–(5) [Reserved]

(6) The monitor circuit shall be such that it may be continuously operated and the emitted carrier of the station is not heterodyned thereby.

(7) Means shall be provided for adjustment of the temperature or other means for correction of the indications of the monitor to agree with the external standard.

(c) *Tests to be made by the Laboratory Division of the F. C. C.* The tests to be made at the Laboratory will include the determination of the following:

(1) *Accuracy.* (i) Oscillator frequency, as received.

(ii) Constancy of oscillator frequency, as measured several times in 1 month.

(iii) Accuracy of readings of frequency-difference instrument.

(iv) Functioning of frequency adjustment device.

(v) Effects on frequency of changing tubes and of voltage variations.

(2) *Temperature control stability.* Effect on frequency of variation of room temperature through a range not to exceed 10° to 35° C.

(3) *Sensitivity.* Response of indicating instrument to small changes of frequency.

(4) *General construction.* (i) Inspection to determine ability to stand shipment and service.

(ii) Special tests to determine quality of construction, such as effect of tilting or tipping on frequency.

(5) *Miscellaneous performance.* Various, depending on character of apparatus (e. g., changes after stopping and starting, effect of varying coupling with transmitter, etc.).

(d) *Test operation of equipment.* The equipment will be operated in a test in the same way and the same conditions under which it will be used in service as specified by the manufacturer. The manufacturer shall supply to the Laboratory Division all instructions or services which will be supplied to the purchaser of the equipment. The equipment, as submitted, shall be adjusted for operation in connection with broadcast stations operating on 1600 kilocycles.

[28 F.R. 13674, Dec. 14, 1963, as amended at 32 F.R. 10306, July 13, 1967]

§ 73.50 Requirements for approval of modulation monitors.

(a) Any manufacturer desiring to submit a monitor for type approval shall supply the Commission with full specification details (two sworn copies) specified in paragraph (b) of this section. If this information appears to meet the requirements of the rules, shipping instructions will be issued to the manufacturer. The shipping charges to and from the Laboratory at Laurel, Maryland, shall be paid for by the manufacturer. Approval of a monitor will only be given on the basis of the data obtained from the sample monitor submitted to the Commission for test.

(1) In approving a monitor upon the basis of the tests conducted by the Laboratory, the Commission merely recognizes that the type of monitor has the inherent capability of functioning in compliance with the rules, if properly constructed, maintained, and operated.

(2) Additional rules with respect to withdrawal of type approval, modification of type approval equipment and limitations on the findings upon which type approval is based are set forth in Part 2, Subpart F, of this chapter.

(b) The specifications that the modulation monitor shall meet before it will be approved by the Commission are as follows:

(1) A DC meter for setting the average rectified carrier at a specific value and to indicate changes in carrier intensity during modulation.

(2) A peak indicating light or similar device that can be set at any predetermined value from 50 to 120 percent modulation to indicate on positive peaks, and/or from 50 to 100 percent negative modulation.

(3) A semi-peak indicator with a meter having the characteristics given below shall be used with a circuit such that peaks of modulation of duration between 40 and 90 milliseconds are indicated to 90 percent of full value and the discharge rate adjusted so that the pointer returns from full reading to 10 percent of zero within 500 to 800 milliseconds. A switch shall be provided so that this meter will read either positive or negative modulation and, if desired, in the center position it may read both in a full-wave circuit. The characteristics of the indicating meter are as follows:

(i) The damping factor shall be between 16 and 200. The useful scale length shall be at least 2.3 inches. The meter shall be calibrated for modulation from 0 to 110 percent and in decibels below 100 percent with 100 percent being 0 db.

(ii) The accuracy of the reading on percentage of modulation shall be ±2 percent for 100 percent modulation, and ±4 percent of full scale reading at any other percentage of modulation.

(4) The frequency characteristics curve shall not depart from a straight line more than ±½ db from 30 to 10000 cycles. The amplitude distortion or generation of audio harmonics shall be kept to a minimum.

(5) The modulation meter shall be equipped with appropriate terminals so that an external peak counter can be readily connected.

(6) Modulation will be tested at 115 volts ±5 percent and 60 cycles, and the above accuracies shall be applicable under these conditions.

(7) All specifications not already covered above, and the general design, construction, and operation of these units must be in accordance with good engineering practice.

(c) The modulation monitor may be a part of the frequency monitor.

TECHNICAL OPERATION

§ 73.51 Antenna input power; how determined.

(a) Except in those circumstances described in paragraph (d) of this section, the antenna input power shall be determined by the direct method, i.e., as the product of the antenna resistance at the operating frequency (see § 73.54) and the square of the unmodulated antenna current at that frequency, measured at the point where the antenna resistance has been determined.

(b) The authorized antenna input power for each station shall be equal to the nominal power for such station, with the following exceptions:

(1) For stations with nominal powers of 5 kilowatts, or less, the authorized antenna input power to directional antennas shall exceed the nominal power by 8 percent.

(2) For stations with nominal powers in excess of 5 kilowatts, the authorized antenna input power to directional antennas shall exceed the nominal power by 5.3 percent.

(3) In specific cases, it may be necessary to limit the radiated field to a level below that which would result if nominal power were delivered to the antenna. In such cases, excess power may be dissipated in the antenna feed circuit (see § 73.54 (a) and (d)), and/or the transmitter may be operated with power output at a level which is less than the nominal value.

(i) Where a dissipative network is employed, the authorized antenna current and resistance, and the authorized antenna input power shall be determined at the input terminals of the dissipative network.

(ii) Where the authorized antenna input power is less than the nominal power, subject to the conditions set forth in paragraph (c) of this section, the transmitter may be operated at the reduced power level necessary to supply the authorized antenna input power.

(c) Applications for authority to operate with antenna input power which is less than nominal power and/or to employ a dissipative network in the antenna system shall be made on FCC Form 302. The technical information supplied on section II–A of this form shall be that applying to the proposed conditions of operation. In addition, the following information shall be furnished, as pertinent:

(1) Full details of any network employed for the purpose of dissipating radio frequency energy otherwise delivered to the antenna (see § 73.54).

(2) A showing that the transmitter has been type accepted for operation at the proposed power output level, or, in lieu thereof:

(i) A full description of the means by which transmitter output power will be reduced.

(ii) Where the proposed transmitter power output level is less than 90 percent of nominal power, equipment performance measurements, as specified in § 73.47, conducted at the proposed power output level; in addition, the measurements and observations required by § 73.47(a) (1), (2), (3), and (5) for power output levels 10 percent above, and 10 percent below, the proposed output level, but at a modulation level of 95 to 100 percent only. Such measurements must demonstrate that, operating at the proposed power output level, the transmitter meets the performance requirements of § 73.40.

(iii) A showing that, at the proposed power output level, means are provided for varying the transmitter output within a tolerance of ±10 percent, to compensate for variations in line voltage or other factors which may affect the power output level.

(d) The antenna input power shall be determined on a temporary basis by the indirect method described in paragraphs (e) and (f) of this section in the following circumstances: (1) In an emergency, where the authorized antenna system has been damaged by causes beyond the control of the licensee or permittee (see § 73.45), or (2) pending completion of authorized changes in the antenna system, or (3) if changes occur in the antenna system or its environment which affect or appear likely to affect the value of antenna resistance or (4) if the antenna current meter becomes defective (see § 73.58). Prior authorization for the indirect determination of antenna input power is not required. However, an appropriate notation shall be made in the operating log.

(e) (1) Antenna input power is determined indirectly by applying an appropriate factor to the plate input power, in accordance with the following formula:

Antenna input power$=Ep \times Ip \times F$

Where:

Ep=Plate voltage of final radio stage.

Ip=Total plate current of final radio stage.

F=Efficiency factor.

(2) The value of *F* applicable to each mode of operation shall be entered in the operating log for each day of operation, with a notation as to its derivation. This factor shall be established by one of the methods described in paragraph (f) of this section, which are listed in order of preference. The product of the plate current and plate voltage, or, alternatively, the antenna input power, as determined pursuant to subparagraph (1) of this paragraph, shall be entered in the operating log under an appropriate heading for each log entry of plate current and plate voltage.

(f) (1) If the transmitter and the antenna input power utilized during the period of indirect power determination are the same as have been authorized and utilized for any period of regular operation, the factor *F* shall be the ratio of such authorized antenna input power to the corresponding plate input power of the transmitter for regular conditions of operation, computed with values of plate voltage and plate current obtained from the operating logs of the station for the last week of regular operation.

(2) If a station has not been previously in regular operation with the power authorized for the period of indirect power determination, if a new transmitter has been installed, or if, for any other reason, the determination of the factor *F* by the method described in subparagraph (1) of this paragraph is impracticable:

(i) The factor *F* shall be obtained from the transmitter manufacturer's letter or test report retained in the station's files, if such a letter or test report specifies a unique value of *F* for the power level and frequency utilized; or

(ii) By reference to the following table:

Factor (F)	Method of modulation	Maximum rated carrier power	Class of amplifier
0.70	Plate	0.25-1.0 kw.	
.80	Plate	5 kw. and over	
.35	Low level	0.25 kw. and over	B
.65	Low level	0.25 kw. and over	BC [1]
.35	Grid	0.25 kw. and over	

[1] All linear amplifier operation where efficiency approaches that of Class C operation.

NOTE: When the factor F is obtained from the table, this value shall be used even though the antenna input power may be less than the maximum rated carrier power of the transmitter.

(iii) If a station has been authorized to operate with antenna input power which is lower than nominal power, the factor *F* shall have the value established when such operation was authorized.

[37 F.R. 7516, Apr. 15, 1972]

§ 73.52 Antenna input power; maintenance of.

(a) The actual antenna input power of each station shall be maintained as near as is practicable to the authorized antenna input power and shall not be less than 90 percent or greater than 105 percent of the authorized power; except that, if, in an emergency, it becomes technically impossible to operate with the authorized power, the station may be operated with reduced power for a period of 10 days, or less, without further authority from the Commission: *Provided*, That the Commission and the Engineer in Charge of the radio district in which the station is located shall be immediately notified in writing if the station is unable to maintain the minimum operating schedule, specified in § 73.71, with authorized power, and shall be subsequently notified upon resumption of operation with authorized power.

(b) In addition to maintaining antenna input power within the above limitations, each station employing a directional antenna shall maintain the relative amplitudes of the antenna currents in the elements of its array within 5 percent of the ratios specified in its license or other instrument of authorization, unless more stringent limits are specified therein.

[37 F.R. 7517, Apr. 15, 1972]

§ 73.54 Antenna resistance and reactance: how determined.

(a) The resistance of an omnidirectional series fed antenna shall be measured at the base of the antenna without intervening coupling networks or components. The resistance of a shunt excited antenna shall be measured at the point the radio frequency energy is transferred to the feed wire circuit, without intervening networks (with the exception that, if the termination of the feed wire is highly reactive a network containing no shunt element may be interposed between the feed wire termination and the point where the resistance is determined). Any network inserted in the antenna circuit for the express purpose of dissipating a portion of the radio frequency energy provided by the transmitter shall be located at the base of the antenna, and the antenna resistance specified in the license or other instrument of authorization shall be the effective resistance at the input terminals of the dissipative network.

(b) The resistance and reactance of a directional antenna shall be measured at the point of common radiofrequency input to the directional antenna system The following conditions shall obtain:

(1) The antenna shall be finally adjusted for the required radiation pattern.

(2) The reactance at the operating frequency and at the point of measurement shall be adjusted to zero, or as near thereto as practicable.

(c) (1) The resistance of an antenna shall be determined by the following procedure: A series of discrete measurements shall be made over a band of frequencies extending from approximately 25 kc/s below the operating frequency to approximately 25 kc/s above that frequency, at intervals of approximately 5 kc/s. The measured values shall be plotted on a linear graph, with frequency as the abscissa and resistance as the ordinate. A smooth curve shall be drawn through the plotted values. The resistance value corresponding to the point of intersection of the curve and the ordinate representing the operating frequency of the station shall be the resistance of the antenna.

(2) For a directional antenna, the reactance of the antenna shall be determined by a procedure similar to that described in subparagraph (1) of this paragraph.

(d) Any element included in the antenna circuit for the express purpose of dissipating a portion of the energy delivered by the transmitter to the directional antenna shall be included at the point of common radio-frequency input, and the authorized common point resistance shall include the effect of the dissipative element.

(e) Applications for authority to determine power by the direct method shall specify the antenna or common point resistance, and shall include the following supporting information.

(1) A full description of the method used to make measurements.

(2) A schematic diagram showing clearly all components of coupling circuits, the point of resistance measurement, location of antenna ammeter, connections to and characteristics of all tower lighting isolation circuits, static drains, and any other fixtures, sampling lines, etc., connected to or supported by the antenna, including other antennas and associated circuits. Any network or circuit component incorporated for the purpose of dissipating radio frequency power shall be specifically identified, and the impedances of all components which control the level of power dissipation, and the effective input resistance of the network shall be indicated.

(3) Make and type of each calibrated instrument employed, manufacturer's rated accuracy, together with the date of last calibration of the instrument, the accuracy of the calibration, and the identity of the person or firm making the calibration.

(4) A tabulation of all measured data.

(5) Graph(s) plotted from this data.

(6) The qualifications of the engineer(s) making the measurements.

[34 F.R. 18305, Nov. 15, 1969, as amended at 37 F.R. 7517, Apr. 15, 1972]

§ 73.55 Modulation.

The percentage of modulation shall be maintained at as high a level as is consistent with good quality of transmission and good broadcast service. In no case shall it exceed 100 percent on negative peaks of frequent recurrence, or 125 percent on positive peaks at any time. Generally, modulation shoud not be less than 85 percent on peaks of frequent recurrence, but where such action may be required to avoid objectionable loudness, the degree of modulation may be reduced to whatever level is necessary for this purpose, even though, under such circumstances, the level may be substantially less than that which produces peaks of frequent recurrence at a level of 85 percent.

[37 F.R. 7514, Apr. 15, 1972]

§ 73.56 Modulation monitors.

(a) Each station shall have in operation, either at the transmitter or at the place the transmitter is controlled, a modulation monitor of a type approved by the Commission.

NOTE: Approved modulation monitors are included on the Commission's "Radio Equipment List, Part B, Aural Broadcast Equipment". Copies of this list are available for inspection at the Commission's office in Washington, D. C. and at each of its field offices.

(b) In the event that the modulation monitor becomes defective the station may be operated without the monitor pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission: *Provided*, That:

(1) Appropriate entries shall be made in the maintenance log of the station showing the date and time the monitor was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the monitor is found to be defective and immediately after the repaired or replacement monitor has been installed and is functioning properly.

(3) The degree of modulation of the station shall be monitored with a cathode ray oscilloscope or other acceptable means.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the above allowed period, informal request in accordance with § 1.549 of this chapter may be filed with the Engineer in Charge of the radio district in which the station is operating for such additional time as may be required to complete repairs of the defective instrument.

(d) Each station operated by remote control shall continuously, except when other readings are being taken, monitor percent of modulation or shall be equipped with an automatic device to limit percent of modulation on negative peaks to 100.

§ 73.58 Indicating instruments.

(a) Each standard broadcast station shall be equipped with indicating instruments which conform with the specifications set forth in § 73.39 for measuring the DC plate circuit current and voltage of the last radio frequency amplified stage; the radio frequency base current of each antenna element; and, for stations employing directional antenna systems, the radio frequency current at the point of common input to the directional antenna.

(b) In the event that any one of these indicating instruments becomes defective when no substitute which conforms with the required specifications is available, the station may be operated without the defective instrument pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission: *Provided*, That:

(1) Appropriate entries shall be made in the maintenance log of the station showing the date and time the meter was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the instrument is found to be defective and immediately after the repaired or replacement instrument has been installed and is functioning properly.

(3) If the defective instrument is the antenna current meter of a nondirectional station which does not employ a remote antenna ammeter, or if the defective instrument is the common point meter of a station which employs a directional antenna, and does not employ a remote common point meter, the operating power shall be determined by the indirect method in accordance with § 73.51(c) and (d) during the entire time the station is operated without the antenna current meter or common point meter. However, if a remote antenna ammeter or a remote common point meter is employed and the antenna current meter or common point meter becomes defective, the remote meter may be used in determining operating power by the direct method pending the return to service of the regular meter, provided other meters are maintained at same value previously employed.

(c) If conditions beyond the control of the licensee prevent the restoration of the meter to service within the above allowed period, informal request in accordance with § 1.549 of this chapter may be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

(d) Remote antenna ammeters and remote common point meters are not required; therefore, authority to operate without them is not necessary. However, if a remote antenna ammeter or common point meter is employed and becomes defective, the antenna base currents may be read and logged once daily for each mode of operation, pending the return to service of the regular remote meter.

[28 F.R. 13574, Dec. 14, 1963, as amended at 34 F.R. 18305, Nov. 15, 1969]

§ 73.59 Frequency tolerance.

The operating frequency of each station shall be maintained within 20 cycles per second of the assigned frequency.

[33 F.R. 15418, Oct. 17, 1968]

§ 73.60 Frequency monitor.

(a) The licensee of each station shall have in operation, either at the transmitter or at the place where the transmitter is controlled, a frequency monitor of a type approved by the Commission which shall be independent of the frequency control of the transmitter.

NOTE: Approved frequency monitors are included on the Commission's "Radio Equipment List, Part B, Aural Broadcast Equipment". Copies of this list are available for inspection at the Commission's office in Washington, D. C. and at each of its field offices.

(b) In the event that the frequency monitor becomes defective the station may be operated without the monitor pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission: *Provided*, That:

(1) Appropriate entries shall be made in the maintenance log of the station showing the date and time the monitor was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the monitor is found to be defective and immediately after the repaired or replacement monitor has been installed and is functioning properly.

(3) The frequency of the station shall be measured by an external source at least once each seven days and the results entered in the station log.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the above allowed period, informal request in accordance with § 1.549 of this chapter may be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

§ 73.61 New equipment; restrictions.

The Commission will authorize the installation of new transmitting equipment in a broadcast station or changes in the frequency control of an existing transmitter only if such equipment is so designed that there is reasonable assurance that the transmitter is capable of maintaining automatically the assigned frequency within the limits specified in § 73.59.

§ 73.62 Automatic frequency control equipment; authorization required.

New automatic frequency control equipment and changes in existing automatic frequency control equipment that may affect the precision of frequency control or the operation of the transmitter shall be installed only upon authorization from the Commission.

§ 73.63 Auxiliary transmitter.

Upon showing that a need exists for the use of an auxiliary transmitter in addition to the regular transmitter of a broadcast station, a license therefor may be issued: *Provided*, That:

(a) An auxiliary transmitter may be installed either at the same location as the main transmitter or at another location.

(b) A licensed operator shall be in control whenever an auxiliary transmitter is placed in operation.

(c) The auxiliary transmitter shall be maintained so that it may be placed in operation at any time for any one of the following purposes:

(1) The transmission of the regular programs upon the failure of the main transmitter.

(2) The transmission of the regular programs during maintenance or modification work on the main transmitter necessitating discontinuance of its operation.

(3) Emergency Broadcast System operation, provided the auxiliary transmitter is used in connection with a National Defense Emergency Authorization.

(4) Upon request of a duly authorized representative of the Commission.

(5) An auxiliary transmitter may be used for the regular transmission of programs during periods of operation included in a Presunrise Service Authority (PSA).

(d) The auxiliary transmitter shall be tested at least once each week to determine that it is in proper operating condition and that it is adjusted to the licensed frequency: *Provided, however*, That the test in any week may be omitted if the auxiliary transmitter has been operated during the week pursuant to paragraph (c) of this section and such operation was satisfactory. Tests while using the regular antenna shall be conducted only between 12 midnight and 9 a.m., local time. Tests with a dummy load may be conducted at any time.

(e) The auxiliary transmitter shall be equipped with satisfactory control equipment which will enable the maintenance of the frequency emitted by the station within the limits prescribed by the regulations in this part.

(f) An auxiliary transmitter which is licensed at a geographical location different from that of the main transmitter shall be equipped with a frequency control which will automatically hold the frequency within the limits prescribed by the regulations in this part without any manual adjustment during operation or when it is being put into operation.

(g) The operating power of an auxiliary transmitter may be less than the authorized power, but in no event shall it be greater than such power.

(h) All regulations as to safety requirements and spurious emissions applying to broadcast transmitting equipment shall apply also to an auxiliary transmitter.

[28 F.R. 13574, Dec. 14, 1963, as amended at 32 F.R. 11796, Aug. 16, 1967; 33 F.R. 15418, Oct. 17, 1968]

§ 73.64 Alternate main transmitters.

The licensee of a standard broadcast station may be licensed for alternate main transmitters provided that a technical need for such alternate transmitters is shown, such as licensees maintaining 24-hour schedule and needing alternate operations for maintenance, or where developmental work requires alternate operation, and that the following conditions are met:

(a) Both transmitters are located at the same place.

(b) The transmitters have the same power rating except at stations operating with different daytime and nighttime power, when it shall be permissible to employ transmitters of power ratings appropriate to either the licensed daytime or nighttime power.

(c) The external effects from both transmitters are substantially the same as to frequency stability, reliability of operation, radio harmonics and other spurious emissions, audio frequency range and audio harmonic generation in the transmitter.

§ 73.65 Antenna structure, marking, and lighting.

The provisions of Part 17 of this chapter (Construction, Marking, and Lighting of Antenna Structures) require that certain antenna structures be painted and/or lighted in accordance with the provisions of that part. Where the antenna structure of a facility authorized under this subpart is required to be painted or lighted, see §§ 17.47 through 17.53 of this chapter.

[33 F.R. 15418, Oct. 17, 1968]

REMOTE CONTROL

AUTHORITY: §§ 3.66 to 3.68 issued under sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318.

§ 73.66 Remote control authorization.

(a) An application to operate a station by remote control, to add a remote control point, or to change the location of a remote control point shall be made on FCC Form 301-A, except that:

(1) A request to operate a new station with nondirectional antenna by remote control may be included in the application (FCC Form 301) for construction permit or modification of construction permit.

(2) A request to change a remote control point to a new main studio location beyond the corporate limits of the community to which the station is assigned and at a point other than the authorized transmitter site may be included in the application (FCC Form 301) for authority to change the main studio location.

(3) No application need be filed to change a remote control point to an authorized main studio location within the corporate limits of the community to which the station is assigned or to its authorized transmitter site, or to delete a remote control point. However, any such change shall be reported promptly to the Commission, and to the Engineer in Charge of the radio district in which the station is located.

(b) An authorization for remote control will be issued only after a satisfactory showing has been made which includes the following:

(1) The location of remote control point(s).

(2) That the directional antenna system, if such is authorized, is in proper adjustment and is stable.

[32 F.R. 11797, Aug. 16, 1967]

§ 73.67 Remote control operation.

(a) Operation by remote control shall be subject to the following conditions:

(1) The equipment at the operating and transmitting positions shall be so installed and protected that it is not accessible to or capable of operation by persons other than those duly authorized by the licensee.

(2) The control circuits from the operating positions to the transmitter shall provide positive on and off control and shall be such that open circuits, short circuits, grounds or other line faults will not actuate the transmitter and any fault causing loss of such control will automatically place the transmitter in an inoperative position.

(3) A malfunction of any part of the remote control equipment and associated line circuits resulting in improper control or inaccurate meter readings shall be cause for the immediate cessation of operation by remote control.

(4) Control and monitoring equipment shall be installed so as to allow the licensed operator at the remote control point to perform all the functions in a manner required by the Commission's rules.

(5) The indications at the remote control point of the antenna current meter or, for directional antennas, the common point current meter and remote base current meters, shall be read and entered in the operating log each half hour.

(6) The indications at the transmitter, if a directional antenna station, of the common point current, base currents, phase monitor sample loop currents and phase indications shall be read and entered in the operating log once each day for each pattern. These readings must be made within two hours after the commencement of operation for each pattern.

(b) All stations, whether operating by remote control or direct control, shall be equipped so as to be able to follow the Emergency Action Notification procedures described in § 73.932.

(c) The broadcast transmitter carrier may be amplitude modulated with a tone for the purpose of transmitting to the remote control point essential meter indications and other data on the operational condition of the broadcast transmitter and associated devices, subject to the following conditions:

(1) The tone shall have a frequency no higher than 30 cycles per second.

(2) The amplitude of modulation of the carrier by the tone shall not be higher than necessary to effect reliable and accurate data transmission, and shall not, in any case, exceed 6 percent.

(3) The tone shall be transmitted only at such times and during such intervals that the transmitted information is actually being observed or logged.

(4) Measures shall be employed to insure that during the periods the tone is being transmitted the total modulation of the carrier does not exceed 100 percent on negative peaks.

(5) Such tone transmissions shall not significantly degrade the quality of program transmission or produce audible effects resulting in public annoyance.

(6) Such tone transmissions shall not result in emissions of such a nature as to result in greater interference to other stations than is produced by normal program modulation.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 15418, Oct. 17, 1968; 34 F.R. 17878, Nov. 5, 1969]

§ 73.68 Remote control renewal application.

(a) An application for renewal of a remote control authorization may be made on the application for renewal of station license.

(b) Stations employing directional antenna and operated by remote control shall make a skeleton proof of performance each year, consisting of three or four measurements on each radial used in the original application and must submit the results of these measurements, plus the monitoring point readings, with the renewal application.

OPERATION

§ 73.71 Minimum operating schedule.

(a) All standard broadcast stations are required to maintain an operating schedule of not less than two-thirds of the total hours they are authorized to operate between 6 a.m. and 6 p.m., local time, and two-thirds of the total hours they are authorized to operate between 6 p.m. and midnight, local time, each day of the week except Sunday: *Provided, however,* That stations authorized for daytime operation only need comply only with the minimum requirement for operation between 6 a.m. and 6 p.m.

(b) In the event that causes beyond a licensee's control make it impossible to adhere to the operating schedule in paragraph (a) of this section or to continue operating, the station may limit or discontinue operation for a period of not more than 10 days, without further authority of the Commission. However, the Commission and the Engineer in Charge of the radio district in which the station is located shall be immediately notified in writing if the station is unable to maintain the minimum operating schedule and shall be subsequently notified when the station resumes regular operation.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 4410, Mar. 12, 1968]

§ 73.72 Operation during experimental period.

The licensee of each standard broadcast station shall operate or refrain from operating its station during the experimental period as directed by the Commission in order to facilitate frequency measurement or for the determination of interference.

§ 73.73 Specified hours.

If the license of a station specifies the hours of operation, the schedule so specified shall be adhered to except as provided in §§ 73.71 and 73.72.

§ 73.74 Sharing time.

If the licenses of stations authorized to share time do not specify hours of operation, the licensees shall endeavor to reach an agreement for a definite schedule of periods of time to be used by each. Such agreement shall be in writing and each licensee shall file the same in triplicate original with each application to the Commission for renewal of license. If and when such written agreements are properly filed in conformity with this section the file mark of the Commission will be affixed thereto, one copy will be retained by the Commission, one copy forwarded to the Engineer in Charge of the radio district in which the station is located, and one copy returned to the licensee to be posted with the station license and considered as a part thereof. If the license specifies a proportionate time division, the agreement shall maintain this proportion. If no proportionate time division is specified in the license, the licensees shall agree upon a division of time. Such division of time shall not include simultaneous operation of the stations unless specifically authorized by the terms of the license.

§ 73.76 Sharing time; experimental period.

If the license of a station authorized to share time does not specify the hours of operation, the station may be operated for the transmission of regular programs during the experimental period provided an agreement thereto is reached with the other stations with which the broadcast day is shared and further provided such operation is not in conflict with § 73.72. Time-sharing agreements for operation during the experimental period need not be submitted to the Commission.

§ 73.77 Sharing time; departure from regular schedule.

A departure from the regular operating schedule set forth in a time-sharing agreement will be permitted only in cases where an agreement to that effect is reduced to writing, is signed by the licensees of the stations affected thereby and filed in triplicate by each licensee with the Commission prior to the time of the proposed change. If time is of the essence, the actual departure in operating schedule may precede the actual filing of written agreement, provided appropriate notice is sent to the Commission and the Engineer in Charge of the radio district in which the station is located.

§ 73.78 Sharing time stations; notification to Commission.

If the licensees of stations authorized to share time are unable to agree on a division of time, the Commission shall be so notified by statement to that effect filed with the applications for renewals of licenses. Upon receipt of such statement the Commission will designate the applications for a hearing and, pending such hearing, the operating schedule previously adhered to shall remain in full force and effect.

§ 73.79 License to specify sunrise and sunset hours.

If the licensee of a broadcast station is required to commence or cease operation, or to change the mode of operation of the station at the times of sunrise and sunset at any particular location, the controlling times for each month of the year are set forth in the station's instrument of authorization. Uniform sunrise and sunset times are specified for all of the days of each month, based upon the actual times of sunrise and sunset for the fifteenth day of that month adjusted to the nearest quarter hour. In accordance with a standardized procedure described therein, actual sunrise and sunset times are derived by interpolation in the tables of the 1946 American Nautical Almanac, issued by the Nautical Almanac Office of the United States Naval Observatory.

§ 73.80 Secondary station; filing of operating schedule.

The licensee of a secondary station which is authorized to operate limited time and which may resume operation at the time the dominant station (or stations) on the same channel ceases operation shall, with each application for renewal of license, file in triplicate a copy of its regular operating schedule, bearing a signed notation by the licensee of the dominant station of its objection or lack of objection thereto. Upon approval of such operating schedule, the Commission will affix its file mark and return one copy to the licensee authorized to operate limited time, which shall be posted with the station license and considered as a part thereof. Departure from said operating schedule will be permitted only in accordance with the procedure set forth in § 73.77.

§ 73.81 Secondary station; failure to reach agreement.

If the licensee of a secondary station authorized to operate limited time and a dominant station on a channel are unable to agree upon a definite time for resumption of operation by the station authorized limited time, the Commission shall be so notified by the licensee of the station authorized limited time. After receipt of such statement the Commission will designate for hearing the applications of both stations for renewal of license, and pending the hearing the schedule previously adhered to shall remain in full force and effect.

§ 73.82 Departure from schedule; material violation.

In all cases where a station licensee is required to prepare and file an operating schedule, any deviation or departure from such schedule, except as herein authorized, shall be considered as a violation of a material term of the license.

§ 73.83 References to time.

Where used in Commission authorizations to specify average times of sunrise and sunset, or to specify other times at which stations commence operation or change modes of operation and which vary with local sunrise and local sunset, "standard time" means standard time (as determined by the Department of Transportation for the various areas of the United States) as that term has been used *prior to* the Uniform Time Act of 1966, i.e., time sometimes referred to as "nonadvanced" or "winter-based" time, without the 1-hour advancement provided for in that Act from late April until late October. In all other time references in Commission authorizations (including times for specified hours and shared hours stations and the expiration times of licenses) "standard time" means local time. The term "local time", where used in this part and in Part 74, of this chapter, means the time (advanced or nonadvanced) prevailing in the community of station location at the particular time of the year. Where used in this part or in Part 74, the term "advanced time" means time from the last Sunday in April until the last Sunday in October with the 1-hour advancement contemplated by the Uniform Time Act of 1966 and sometimes called "daylight saving time"; and the term "nonadvanced time" means time from the last Sunday in October until the last Sunday in April, and time during the remainder of the year in jurisdictions not adopting "advanced time."

[33 F.R. 4410, Mar. 12, 1968]

§ 73.87 Times and modes of program transmission.

Except as provided in § 73.98 and § 73.99, no standard broadcast station shall operate at times, or with modes or powers, other than those specified in the basic instrument of authorization.

[32 F.R. 10447, July 15, 1967, as amended at 33 F.R. 4411, Mar. 12, 1968]

§ 73.88 Blanketing interference.

The licensee of each broadcast station is required to satisfy all reasonable complaints of blanketing interference within the 1 v/m contour.

§ 73.89 Use of frequency and modulation monitors at auxiliary transmitters.

(a) The following shall govern the installation of approved frequency and modulation monitors at auxiliary transmitters:

(1) In case the auxiliary transmitter location is at a site different from that of the main transmitter, an approved

frequency monitor shall be installed at the auxiliary transmitter, except when the frequency of the auxiliary transmitter can be monitored by means of the frequency monitor at the main transmitter.

(2) The provision that the frequency monitor may be located at the site of the main transmitter shall not relieve the obligation that the frequency deviation of the auxiliary transmitter shall be maintained within 20 cycles.

(3) Installation of an approved modulation monitor at the location of the auxiliary transmitter, when different from that of the main transmitter, is optional with the licensee. However, when it is necessary to operate the auxiliary transmitter beyond 2 calendar days, a modulation monitor shall be installed and operated at the auxiliary transmitter. The monitor (if taken from the main transmitter) shall be reinstalled at the main transmitter immediately upon resumption of operation of the main transmitter.

(4) In all cases where the auxiliary transmitter and the main transmitter have the same location, the same frequency and modulation monitor may be used for monitoring both transmitters, provided they are so arranged as to be switched readily from one transmitter to the other.

§ 73.91 Discontinuance of operation.

The licensee of each station shall notify the Commission in Washington, D.C., and the Engineer in Charge of the radio district where such station is located of permanent discontinuance of operation at least two days before operation is discontinued. The licensee, shall, in addition, immediately forward the station license and other instruments of authorization to the Washington, D.C., office of the Commission for cancellation.

§ 73.92 Station and operator licenses; posting of.

(a) The station license and any other instrument of station authorization shall be posted in a conspicuous place and in such manner that all terms are visible, at the place the licensee considers to be the principal control point of the transmitter. At all other control points listed on the station authorization, a photocopy of the station license and other instruments of station authorization shall be posted.

(b) The original operator license, or FCC Form 759, of each station operator shall be posted at the place where he is on duty as an operator.

§ 73.93 Operator requirements.

(a) One or more operators holding a radio operator license or permit of a grade specified in this section shall be in actual charge of the transmitting system, and shall be on duty either at the transmitter location or at the remote control point. If operation by remote control has not been authorized, the transmitter, required monitors and other required metering equipment shall be readily accessible, clearly visible, and located sufficiently close to the operator at the normal operating position that deviations from normal indications of required instruments can be observed readily. If operation by remote control is authorized, the required controls and instruments shall be readily accessible, clearly visible, and located sufficiently close to the operator at the normal operating position that deviations from normal indications of required instruments can be observed readily.

(b) With the exceptions set forth in paragraph (f) of this section, adjustments of the transmitting system and inspection, maintenance, and required equipment performance measurements and required field strength measurements shall be performed only by a first-class radiotelephone operator.

(c) A station using a nondirectional antenna and with authorized power of 10 kilowatts or less shall have at least one first-class radiotelephone operator, readily available at all times, either in full-time employment, or, in the alternative, the licensee may contract in writing for the services on a part-time basis of one or more such operators. Signed contracts with part-time operators shall be kept in the files of the station and shall be made available for inspection upon request by an authorized representative of the Commission. A signed copy of contracts shall be forwarded to the engineer in charge of the radio district in which the station is located within three (3) days after the contract is signed.

(d) A station using a nondirectional antenna, during periods of operation with authorized power in excess of 10 kilowatts, may employ first-class radiotelephone operators, second-class operators, or operators with the third-class permits endorsed for broadcast station operation for routine operation of the transmitting system if the station has in full-time employment at least one first-class radiotelephone operator and complies with the provisions of paragraphs (f) and (g) of this section.

(e) A station using a directional antenna system, which is required by the station authorization to maintain the ratios of the currents in the elements of the system within a tolerance which is less than 5 percent or the relative phases of those currents within a tolerance which is less than 3° shall, without exception, employ first-class radiotelephone operators who shall be on duty and in actual charge of the transmitting system as specified in paragraph (a) of this section during hours of operation with a directional radiation pattern. A station whose authorization does not specifically require therein the maintenance of phase and current relationships within closer tolerances than above specified shall employ first-class radiotelephone operators for routine operation of the transmitting system during periods of directional operation: *Provided, however,* That holders of second-class licenses or third-class permits endorsed for broadcast station operation, may be employed for routine operation of the transmitting system if the following conditions are met:

(1) The station must have in full-time employment at least one first-class radiotelephone operator.

(2) The station shall be equipped with a type-approved phase (antenna) monitor fed by a sampling system installed and maintained pursuant to accepted standards of good engineering practice (see Note 1 at end of this section).

(3) At least once each day, 5 days each week, unless required more frequently by the terms of the station authorization, or, rules governing operation by remote control (see §§ 73.67(a)(6) and 73.113(a)(4)), a first-class radiotelephone operator shall record the following observations in the station maintenance log for each directional radiation pattern used:

(i) Common point current.

(ii) Antenna base currents.

(iii) Sample loop currents or remote antenna base currents and phase monitor indications.

(iv) Antenna base current ratios, and remote antenna or sample loop current ratios, and the deviations in these ratios, in percent, from the licensed values..

A station authorized to use the same directional radiation pattern during all hours of operation shall record these observations with successive readings not less than 12 hours apart.

(4) A partial proof of performance as defined in Note 2 at the end of this section shall be made once each calendar year, with intervals between successive proofs not to exceed fourteen (14) months. The report of such proof measurements shall be prepared and filed as specified in paragraph (b) of § 73.47.

(5) Field strength measurements shall be made at the monitoring points specified in the station authorization at least once each 30 days unless more frequent measurements are required by such authorization. The results of these measurements shall be entered in the station maintenance log. The licensee shall have readily available, and in proper working condition, field strength measuring equipment to perform these measurements.

(f) Subject to the conditions set forth in paragraphs (c), (d), and (e) of this section, the routine operation of the transmitting system may be performed by an operator holding a second-class license or third-class permit endorsed for broadcast station operation. Unless, however, performed under the immediate and personal supervision of an operator holding a first-class radiotelephone license, an operator holding a second-class license or third-class permit endorsed for broadcast station operation, may make adjustments only of external controls, as follows:

(1) Those necessary to turn the transmitter on and off;

(2) Those necessary to compensate for voltage fluctuations in the primary power supply;

(3) Those necessary to maintain modulation levels of the transmitter within prescribed limits;

(4) Those necessary to effect routine changes in operating power which are required by the station authorization;

(5) Those necessary to change between nondirectional and directional or between differing radiation patterns, provided that such changes require only activation of switches and do not involve the manual tuning of the transmitter final amplifier or antenna phasor equipment. The switching equipment shall be so arranged that the failure of any relay in the directional antenna system to ac-

tivate properly will cause the emissions of the station to terminate.

(g) It is the responsibility of the station licensee to insure that each operator is fully instructed in the performance of all the above adjustments, as well as in other required duties, such as reading meters and making log entries. Printed step-by-step instructions for those adjustments which the lesser grade operator is permitted to make, and a tabulation or chart of upper and lower limiting values of parameters required to be observed and logged, shall be posted at the operating position. The emissions of the station shall be terminated immediately whenever the transmitting system is observed operating beyond the posted parameters, or in any other manner inconsistent with the rules or the station authorization, and the above adjustments are ineffective in correcting the condition of improper operation, and a first-class radiotelephone operator is not present.

(h) When lesser grade operators are used, in accordance with paragraphs (d) or (e) of this section, for any period of operation using authorized power in excess of 10 kilowatts, or using a directional radiation pattern, the station licensee shall designate one first-class radiotelephone operator in full-time employment as the chief operator who, together with the licensee, shall be responsible for the technical operation of the station. The station licensee shall notify the engineer in charge of the radio district in which the station is located of the name and license number of the designated chief operator. Such notification shall be by letter within three (3) days of such designation. A copy of the notification shall be posted with the chief operator's license.

(1) An operator designated as chief operator for one station may not be so designated concurrently at any other standard broadcast station.

(2) The station licensee shall vest such authority in, and afford such facilities to the chief operator as may be necessary to insure that the chief operator's primary responsibility for the proper technical operation of the station may be discharged efficiently.

(3) At such times as a regularly designated chief operator is unavailable or unable to act as chief operator (e.g., vacations, sickness), the station licensee shall designate another first-class radiotelephone operator as acting chief operator on a temporary basis. Within 3 days of the date such action is taken, the engineer in charge of the radio district in which the station is located shall be notified by the licensee by letter of the name and license number of the acting chief operator, and shall be notified by letter, again within 3 days of the date when the regularly designated chief operator returns to duty.

(4) The designated chief operator may serve as a routine duty transmitter operator at any station only to the extent that it does not interfere with the efficient discharge of his responsibilities as listed below.

(i) The inspection and maintenance of the transmitting system including the antenna system and required monitoring equipment.

(ii) The accuracy and completeness of entries in the maintenance log.

(iii) The supervision and instruction of all other station operators in the performance of their technical duties.

(iv) A review of completed operating logs to determine whether technical operation of the station has been in accordance with the rules and terms of the station authorization. After review, the chief operator shall sign the log and indicate the date of such review. If the review of the operating logs indicates technical operation of the station is in violation of the rules or the terms of the station authorization, he shall promptly initiate corrective action. The review of each day's operating log shall be made within 24 hours, except that, if the chief operator is not on duty during a given 24-hour period, the logs must be reviewed within 2 hours after his next appearance for duty. In any case, the time before review shall not exceed 72 hours.

(i) The operator on duty at the transmitter or remote control point, may, at the discretion of the licensee and the chief operator, if any, be employed for other duties or for the operation of another radio station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such other stations: *Provided, however,* That such other duties shall not interfere with the proper operation of the standard broadcast transmitting system and keeping of required logs.

(j) At all standard broadcast stations, a complete inspection of the transmitting system and required monitoring equipment in use, shall be made by an operator holding a first class radiotelephone license at least once each day, 5 days each week, with an interval of no less than 12 hours between successive inspections. This inspection shall include such tests, adjustments, and repairs as may be necessary to insure operation in conformance with the provisions of this subpart and the current station authorization.

NOTE 1: The effectiveness of subparagraph (2) of paragraph (e) of this section is suspended pending final action in Docket 18471.

NOTE 2: The partial proof of performance is to consist of at least 10 field strength measurements including the point designated as a monitoring point, taken at a distance of from 2 to 10 miles from the antenna on each radial measured in connection with the latest complete adjustment of the directional antenna system. These measurements shall be analyzed in the manner prescribed in § 73.186 of the rules.

[37 F.R. 11545, June 8, 1972]

§ 73.95 Equipment tests.

(a) During the process of construction of a standard broadcast station the permittee, after notifying the Commission and Engineer in Charge of the radio district in which the station is located, may without further authority of the Commission, conduct equipment tests during the experimental period for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, the rules and regulations, and the applicable engineering standards. In addition, the Commission may authorize equipment tests other than during the experimental period if such operation is shown to be desirable to the proper completion of construction and adjustment of the transmitting equipment and antenna system. An informal application for such authority, giving full details regarding the need for such tests, shall be filed with the Commission at least two (2) days (not including Sundays and Saturdays and legal holidays when the offices of the Commission are not open) prior to the date on which it is desired to begin such operation.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, convenience, or necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid and shall be conducted only during the experimental period (12 midnight to local sunrise) unless otherwise specifically authorized.

(d) Inspection of a station will ordinarily be required during the equipment test period and before the commencement of program tests. After construction and after adjustments and measurements have been completed to show compliance with the terms of the construction permit, the technical provisions of the application therefor, the rules and regulations and the applicable engineering standards, the permittee should notify the Engineer in Charge of the radio district in which the station is located that it is ready for inspection.

(e) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 15418, Oct. 17, 1968]

§ 73.96 Program tests.

(a) Upon completion of construction of a standard broadcast station in accordance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations and applicable engineering standards and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee may request authority to conduct program tests: *Provided*, That such request shall be filed with the Commission at least ten (10) days prior to the date on which it is desired to begin such operation and that the Engineer in Charge of the radio district in which the station is located is notified. All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the license application. If the station is using a directional antenna, a proof of performance must also be filed as required by § 73.33(b).

(b) Program tests shall not commence until specific Commission authority is received. The Commission reserves the right to change the date of the beginning of such tests or to suspend or revoke the authority for program tests as and when such action may appear to be in the public interest, convenience, or necessity.

(c) Unless sooner suspended or revoked program test authority continues valid during Commission consideration of the application for license and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated by final determination upon the application for station license.

(d) All operation on program test authority shall be in strict compliance with the rules governing standard broadcast stations and in strict accordance with representations made in the application for license pursuant to which the tests were authorized.

(e) The granting of program test authority shall not be construed as approval by the Commission of the application for station license.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 15418, Oct. 17, 1968]

§ 73.97 Station inspection.

The licensee of any radio station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 73.98 Operation during emergency.

(a) When necessary to the safety of life and property and in response to dangerous conditions of a general nature, standard broadcast stations may, at the discretion of the licensee and without further Commission authority, transmit emergency weather warnings and other emergency information. Examples of emergency situations which may warrant either an immediate or delayed response by the licensee are: Tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, discharge of toxic gases, widespread power failures, industrial explosions, and civil disorders. Transmission of information concerning school closings and changes in schoolbus schedules resulting from any of these conditions, is appropriate. In addition, and if requested by responsible public officials, emergency point-to-point messages may be transmitted for the purpose of requesting or dispatching aid and assisting in rescue operations.

(b) When emergency operation is conducted utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan as provided in § 73.971, the attention signal described in § 73.906 may be employed.

(c) Except as provided in paragraph (d) of this section, emergency operation shall be confined to the hours, frequencies, powers, and modes of operation specified in the license documents of the stations concerned.

(d) When adequate advance warning cannot be given with the facilities or hours authorized, stations may employ their full daytime facilities during nighttime hours to carry weather warnings and other types of emergency information connected with the examples listed in paragraph (a) of this section. Because of skywave interference impact on other stations assigned to the same channel, such operation may be undertaken only if regular, unlimited-time service is nonexistent, inadequate from the standpoint of coverage, or not serving public need. All operation under this paragraph must be conducted on a noncommercial basis. Recorded music may be used to the extent necessary to provide program continuity.

(e) Any emergency operation undertaken in accordance with this section may be terminated by the Commission, if required in the public interest.

(f) Immediately upon cessation of an emergency during which broadcast facilities were used for the transmission of point-to-point messages under paragraph (a) of this section, or when daytime facilities were used during nighttime hours in accordance with paragraph (d) of this section, a report in letter form shall be forwarded to the Commission and the Engineer in Charge of the radio district in which the station is located, setting forth the nature of the emergency, the dates and hours of emergency operation, and a brief description of the material carried during the emergency period. A certification of compliance with the noncommercialization provision of paragraph (d) of this section must accompany the report where daytime facilities are used during nighttime hours, together with a detailed showing concerning the alternate service provisions of that paragraph.

(g) If an Emergency Action Condition is declared while emergency operation under this section is in progress, the Emergency Action Notification shall take precedence.

[33 F.R. 7491, May 21, 1968]

§ 73.99 Presunrise service authority.

(a) In order to afford the maximum uniformity in early morning operations compatible with interference considerations, the following classes of standard broadcast permittees and licensees are eligible to request presunrise service authority (PSA):

(1) Class II stations operating on clear channels other than Class I–A clear channels; Class II stations operating on Class I–A clear channels assigned to the United States under the NARBA or the U.S./Mexican Agreement, where such Class II stations are located west of cochannel Class I–A stations; and Class II stations operating on the Class I–A clear channels 730, 800, 900, 1050, 1220, and 1570 kc/s, which are assigned to Mexico under the aforementioned agreements.

(2) Class III stations.

(b) When issued, a PSA will permit:

(1) Class II stations operating on Mexican Class I–A clear channels to commence operation with their daytime antenna systems at 6 a.m. local time, and to continue such operation until the sunrise times specified in their basic instruments of authorization; and other Class II stations, where eligible under paragraph (a)(1) of this section, to commence operation with their daytime or critical hours antenna systems either at 6 a.m. local time, or at the time of sunrise at the westernmost Class I station located east of the Class II stations (whichever is later), and to continue such operation until the sunrise times specified in their basic instruments of authorization: *Provided*, That the permissible power to be specified in a PSA shall not exceed 500 watts (or the authorized daytime or critical hours power, if less than 500 watts), or such lesser power as may be determined by computations made pursuant to paragraph (c) of this section.

(2) Class III stations to commence operation with their daytime antenna systems at 6 a.m. local time, and to continue such operation until local sunrise: *Provided*, That the permissible power, to be specified in the PSA, shall not exceed 500 watts or such lesser power as may be determined on the basis of calculations made pursuant to paragraph (c) of this section.

(c) Notwithstanding the provisions of §§ 1.571 and 1.580 of this chapter, requests for PSA's shall be treated as proposals for minor changes in existing facilities and, as such, are not subject to the procedural requirements or remedies applicable to applications for new facilities and major changes therein. PSA requests shall be submitted by letter, signed in the manner specified in § 1.513 of this chapter, with the following information:

(1) Name, call letters and station location.

(2) For Class II stations operating on clear channels other than Class I–A clear channels, a showing that objectionable interference as determined by the Standard Broadcast Technical Standards (§§ 73.182 to 73.190), or by the engineering standards of the NARBA (whichever is controlling), will not be caused within the 0.5 mv/m 50 percent skywave contour of any domestic Class I–B station, or of a Class I–B station in any country signatory to the NARBA, where the Class II station is located east of the Class I–B station; for Class II stations operating on Mexican Class I–A clear channels, and for Class II stations located east of cochannel Mexican Class I–B stations, a showing under the engineering standards of the United States/Mexican Agreement that the Class II station does not produce a signal in excess of 25 μv/m 10 percent skywave at any point on the cochannel Mexican Class I station's 0.5 mv/m 50 percent skywave contour which falls on Mexican territory, or more than 50 μv/m 10 percent skywave at any point on the Mexican border or boundary where the signal of the Mexican Class I station exceeds 0.5 mv/m 50 percent skywave in strength. In addition, the applicant must show that foreign Class II stations (if any) assigned to the same channel as the U.S. Class II station will receive full protection under the standards for nighttime operation set forth in the applicable agreement. If the foregoing protections cannot be achieved by the Class II station while operating with 500 watts, a showing may be submitted to establish the level to which power must be limited to preclude objectionable interference: *Provided*, That in relation to Canadian Class II stations, the permissible power level may be established in the manner described in subparagraph (3) of this paragraph by the use of Figure 12 of § 73.190.

(3) For Class III stations, a showing that cochannel stations in foreign countries will receive full treaty protection. If such protection cannot be achieved on the basis of 500-watt operation, calculations may be submitted to establish the level to which power must be reduced to preclude objectionable interference: *Provided*, That with respect to Canadian Class III stations, such power level may

be established by a showing that the radiation at the pertinent vertical angle toward cochannel Canadian stations does not exceed that defined in Figure 12 of § 73.190. If the latter showing cannot be made on the basis of 500-watt operation, calculations may be submitted to establish the level to which power must be reduced in order to limit radiation at the pertinent vertical angle to the values specified in Figure 12 of § 73.190.

(4) A description of the method whereby any proposed power reduction will be achieved.

(d) Calculations made under paragraph (c) of this section shall not take outstanding PSA's into account, nor shall the grant of a PSA confer any degree of interference protection on the holder thereof.

(e) Operation under a PSA is not mandatory, and will not be included in determining compliance with the requirements of § 73.71. To the extent actually undertaken, however, presunrise operation will be considered by the Commission in determining overall compliance with past programing representations and station policy concerning commercial matter.

(f) The PSA is secondary to the basic instrument of authorization and may be suspended, modified, or withdrawn by the Commission without prior notice or right to hearing, if necessary to resolve interference conflicts, to implement agreements with foreign governments, or in other circumstances warranting such action.

(g) The PSA will be issued for a term coinciding with the current basic instrument of authorization and, unless surrendered by the holder or suspended, modified or withdrawn by the Commission, will have continuing or renewed effect under succeeding instruments.

(h) The issuance of a PSA is intended to include the waiver of §§ 73.45, 73.182, and 73.188 in situations where the operation might otherwise be considered as technically substandard. However, such special conditions as the Commission may deem appropriate may be included in the PSA to insure the operation of the transmitter and associated equipment in accordance with all phases of good engineering practice.

(i) In the event of permanent discontinuance of pre-sunrise operation, the PSA shall be forwarded to the Commission's Washington office for cancellation, and the Engineer in Charge of the radio district in which the station is located shall be notified accordingly.

[32 F.R. 10447, July 15, 1967, as amended at 32 F.R. 10774, July 22, 1967; 35 F.R. 18052, Nov. 25, 1970]

OTHER OPERATING REQUIREMENTS

§ 73.111 General requirements relating to logs.

(a) The licensee or permittee of each standard broadcast station shall maintain program, operating, and maintenance logs as set forth in §§ 73.112, 73.113 and 73.114. Each log shall be kept by the station employee or employees (or contract operator) competent to do so, having actual knowledge of the facts required, who in the case of program and operating logs shall sign the appropriate log when starting duty, and again when going off duty.

(b) The logs shall be kept in an orderly and legible manner, in suitable form, and in such detail that the data required for the particular class of station concerned is readily available. Key letters or abbreviations may be used if proper meaning or explanation is contained elsewhere in the log. Each sheet shall be numbered and dated. Time entries shall be made in local time. For the period from the last Sunday in April until the last Sunday in October of each year, the program and operating log entries showing times of sign-on, sign-off, and change in the station's mode of operation shall specifically be indicated as advanced or nonadvanced time.

(c) No log or preprinted log or schedule which becomes a log, or portion thereof, shall be erased, obliterated, or willfully destroyed within the period of retention provided by the provisions of this part. Any necessary correction shall be made only pursuant to §§ 73.112, 73.113 and 73.114, and only by striking out the erroneous portion, or by making a corrective explanation on the log or attachment to it as provided in those sections.

(d) Entries shall be made in the logs as required by §§ 73.112, 73.113, and 73.114. Additional information such as that needed for billing purposes or for the cuing of automatic equipment may be entered on the logs. Such additional information, so entered, shall not be subject to the restrictions and limitations in the Commission's rules on the making of corrections and changes in logs.

[28 F.R. 13574, Dec. 14, 1963, as amended at 31 F.R. 750, Jan. 20, 1966; 33 F.R. 4411, Mar. 12, 1968]

§ 73.112 Program log.

(a) The following entries shall be made in the program log:

(1) *For each program.* (i) An entry identifying the program by name or title.

(ii) An entry of the time each program begins and ends. If programs are broadcast during which separately identifiable program units of a different type or source are presented, and if the licensee wishes to count such units separately, the beginning and ending time for the longer program need be entered only once for the entire program. The program units which the licensee wishes to count separately shall then be entered underneath the entry for a longer program, with the beginning and ending time of each such unit, and with the entry indented or otherwise distinguished so as to make it clear that the program unit referred to was broadcast within the longer program.

(iii) An entry classifying each program as to type, using the definitions set forth in Note 1 at the end of this section.

(iv) An entry classifying each program as to source, using the definitions set forth in Note 2 at the end of this section. (For network programs, also give name or initials of network, e.g., ABC, CBS, NBC, Mutual.)

(v) An entry for each program presenting a political candidate, showing the name and political affiliation of such candidate.

(2) *For commercial matter.* (i) An entry identifying (*a*) the sponsor(s) of the program, (*b*) the person(s) who paid for the announcement, or (*c*) the person(s) who furnished materials or services referred to in § 73.119(d). If the title of a sponsored program includes the name of the sponsor, e.g., XYZ News, a separate entry for the sponsor is not required.

(ii) An entry or entries showing the total duration of commercial matter in each hourly time segment (beginning on the hour) or the duration of each commercial message (commercial continuity in sponsored programs, or commercial announcements) in each hour. See Note 5 at the end of this section for statement as to computation of commercial time.

(iii) An entry showing that the appropriate announcement(s) (sponsorship, furnishing material or services, etc.) have been made as required by section 317 of the Communications Act and § 73.119. A check mark (√) will suffice but shall be made in such a way as to indicate the matter to which it relates.

(3) *For public service announcements.* (i) An entry showing that a public service announcement (PSA) has been broadcast together with the name of the organization or interest on whose behalf it is made. See NOTE 4 following this section for definition of a public service announcement.

(4) *For other announcements.* (i) An entry of the time that each required station identification announcement is made (call letters and licensed location; see § 73.117).

(ii) An entry for each announcement presenting a political candidate showing the name and political affiliation of such candidate.

(iii) An entry for each announcement made pursuant to the local notice requirements of §§ 1.580 (pre-grant) and 1.594 (designation for hearing) of this chapter, showing the time it was broadcast.

(iv) An entry showing that a mechanical reproduction announcement has been made in accordance with the provisions of § 73.118.

(b) Program log entries may be made either at the time of or prior to broadcast. A station broadcasting the programs of a national network which will supply it with all information as to such programs, commercial matter and other announcements for the composite week need not log such data but shall record in its log the time when it joined the network, the name of each network program broadcast, the time it leaves the network, and any nonnetwork matter broadcast required to be logged. The information supplied by the network, for the composite week which the station will use in its renewal application, shall be retained with the program logs and associated with the log pages to which it relates.

(c) No provision of this section shall be construed as prohibiting the recording or other automatic maintenance of data required for program logs. However, where such automatic logging is used, the licensee must comply with the following requirements:

(1) The licensee, whether employing manual or automatic logging or a combination thereof, must be able accurately to furnish the Commission with all information required to be logged;

(2) Each recording, tape, or other means employed shall be accompanied

by a certificate of the operator or other responsible person on duty at the time or other duly authorized agent of the licensee, to the effect that it accurately reflects what was actually broadcast. Any information required to be logged which cannot be incorporated in the automatic process shall be maintained in a separate record which shall be similarly authenticated;

(3) The licensee shall extract any required information from the recording for the days specified by the Commission or its duly authorized representative and submit it in written log form, together with the underlying recording, tape, or other means employed.

(d) Program logs shall be changed or corrected only in the manner prescribed in § 73.111(c) and only in accordance with the following:

(1) *Manually kept log.* Where, in any program log, or preprinted program log, or program schedule which upon completion is used as a program log, a correction is made before the person keeping the log has signed the log upon going off duty, such correction, no matter by whom made, shall be initialed by the person keeping the log prior to his signing of the log when going off duty, as attesting to the fact that the log as corrected is an accurate representation of what was broadcast. If corrections or additions are made on the log after it has been so signed, explanation must be made on the log or on an attachment to it, dated and signed by either the person who kept the log, the station program director or manager, or an officer of the licensee.

NOTE 1. *Program type definitions.* The definitions of the first eight types of programs (a) through (h) are intended not to overlap each other and will normally include all the various programs broadcast. Definitions (i) through (k) are subcategories and the programs classified thereunder will also be classified under one of the appropriate first eight types. There may also be further duplication within types (i) through (k); (e.g., a program presenting a candidate for public office, prepared by an educational institution, would be classified as Public Affairs (PA), Political (POL), and Educational Institution (ED)).

(a) Agricultural programs (A) include market reports, farming, or other information specifically addressed, or primarily of interest, to the agricultural population.

(b) Entertainment programs (E) include all programs intended primarily as entertainment, such as music, drama, variety, comedy, quiz, etc.

(c) News programs (N) include reports dealing with current local, national, and international events, including weather and stock market reports; and when an integral part of a news program, commentary, analysis, and sports news.

(d) Public affairs programs (PA) include talks, commentaries, discussions, speeches, editorials, political programs, documentaries, forums, panels, roundtables, and similar programs primarily concerning local, national, and international public affairs.

(e) Religious programs (R) include sermons or devotionals; religious news; and music, drama, and other types of programs designed primarily for religious purposes.

(f) Instructional programs (I) include programs (other than those classified under Agricultural, News, Public Affairs, Religious or Sports) involving the discussion of, or primarily designed to further an appreciation or understanding of, literature, music, fine arts, history, geography, and the natural and social sciences; and programs devoted to occupational and vocational instruction, instruction with respect to hobbies, and similar programs intended primarily to instruct.

(g) Sports programs (S) include play-by-play and pre- or post-game related activities and separate programs of sports instruction, news or information (e.g., fishing opportunities, golfing instructions, etc.).

(h) Other programs (O) include all programs not falling within definitions (a) through (g).

(i) Editorials (EDIT) include programs presented for the purpose of stating opinions of the licensee.

(j) Political programs (POL) include those which present candidates for public office or which give expressions (other than in station editorials) to views on such candidates or on issues subject to public ballot.

(k) Education Institution programs (ED) include any program prepared by, in behalf of, or in cooperation with, educational institutions, educational organizations, libraries, museums, PTA's, or similar organizations. Sports programs shall not be included.

NOTE 2. *Program source definitions.*—(a) A local program (L) is any program originated or produced by the station, or for the production of which the station is primarily responsible, employing live talent more than 50 percent of the time. Such a program, taped or recorded for later broadcast, shall be classified as local. A local program fed to a network shall be classified by the originating station as local. All nonnetwork news programs may be classified as local. Programs primarily featuring records or transcriptions shall be classified as recorded (REC) even though a station announcer appears in connection with such material. However, identifiable units of such programs which are live and separately logged as such may be classified as local. (E.g., if during the course of a program featuring records or transcriptions a nonnetwork 2-minute news report is given and logged as a news program, the report may be classified as local.)

(b) A network program (NET) is any program furnished to the station by a network (national, regional or special). Delayed broadcasts of programs originated by networks are classified as network.

(c) A recorded program (REC) is any program not otherwise defined in this Note including, without limitation, those using recordings, transcriptions or tapes.

NOTE 3. *Definition of commercial matter* (CM) includes commercial continuity (network and nonnetwork) and commercial announcements (network and nonnetwork) as follows: (Distinction between continuity and announcements is made only for definition purposes. There is no need to distinguish between the two types of commercial matters when logging.)

(a) Commercial continuity (CC) is the advertising message of a program sponsor.

(b) A commercial announcement (CA) is any other advertising message for which a charge is made, or other consideration is received.

(1) Included are (i) "bonus spots"; (ii) trade-out spots, and (iii) promotional announcements of a future program where consideration is received for such an announcement or where such announcement identifies the sponsor of a future program beyond mention of the sponsors' name as an integral part of the title of the program. (E.g., where the agreement for the sale of time provides that the sponsor will receive promotional announcements, or when the promotional announcement contains a statement such as "Listen tomorrow for the—[name of program]—brought to you by—[sponsor's name]—.")

(2) Other announcements including but not limited to the following are not commercial announcements:

(i) Promotional announcements, except as heretofore defined in paragraph (b).

(ii) Station identification announcements for which no charge is made.

(iii) Mechanical reproduction announcements.

(iv) Public service announcements.

(v) Announcements made pursuant to § 73.119(d) that materials or services have been furnished as an inducement to broadcast a political program or a program involving the discussion of controversial public issues.

(vi) Announcements made pursuant to the local notice requirements of §§ 1.580 (pregrant) and 1.594 (designation for hearing) of this chapter.

NOTE 4. *Definition of a public service announcement.* A public service announcement is an announcement for which no charge is made and which promotes programs, activities, or services of Federal, State, or local governments (e.g. recruiting, sales of bonds, etc.) or the programs, activities or services of nonprofit organizations (e.g., UGF, Red Cross Blood Donations, etc.), and other announcements regarded as serving community interests, excluding time signals, routine weather announcements, and promotional announcements.

NOTE 5. *Computation of commercial time.* Duration of commercial matter shall be as close an approximation to the time consumed as possible. The amount of commercial time scheduled will usually be sufficient. It is not necessary, for example, to correct an entry of a 1-minute commercial to accommodate varying reading speeds even though the actual time consumed might be a few seconds more or less than the scheduled time. However, it is incumbent upon the licensee to ensure that the entry represents as close an approximation of the time actually consumed as possible.

[30 F.R. 10198, Aug. 17, 1965, as amended at 31 F.R. 750, Jan. 30, 1966; 33 F.R. 4740, Mar. 20, 1968; 33 F.R. 15419, Oct. 17, 1968]

§ 73.113 Operating log.

(a) The entries specified in subparagraphs (1), (2), (3), (5), and (6) of this paragraph, shall be made in the operating log by the properly licensed operator on duty in actual charge of the transmitting system. The entries required by subparagraph (4) of this paragraph shall be made only by a first-class radiotelephone operator.

(1) An entry of the time the station begins to supply power to the antenna and the time it stops.

(2) An entry of each interruption of the carrier wave, where restoration is not automatic, its cause and duration, followed by the signature of the person restoring operation (if licensed operator other than the licensed operator on duty).

(3) An entry, at the beginning of operation and at intervals not exceeding one-half hour, of the following (actual readings observed prior to making any adjustments to the equipment) and, when appropriate, an indication of corrections made to restore parameters to normal operating values:

(i) Operating constants of last radio stage (total plate voltage and plate current).

(ii) Antenna current or common point current (if directional) without modulation, or with modulation if the meter reading is not affected by modulation.

(iii) Frequency monitor reading.

(4) An entry each day of the following where applicable:

(i) Antenna base current(s) without modulation, or with modulation if the meter reading is not affected by modulation, for each mode of operation:

(*a*) Where remote antenna meters or a remote common point meter are normally employed but are defective.

(*b*) Where required by the station license for directional antenna operation.

(ii) Where there is remote control operation of a directional antenna station, readings for each pattern taken at the transmitter (within 2 hours of commencement of operation with each pattern) of:

(*a*) Common point current without modulation, or with modulation if the meter reading is not affected by modulation.

(*b*) Base current(s) without modulation, or with modulation, if the meter reading is not affected by modulation.

(*c*) Phase monitor sample loop current(s) without modulation or with modulation if the meter reading is not affected by modulation.

(*d*) Phase indications.

(5) Any other entries required by the instrument of authorization or the provisions of this part. See particularly, the additional entries required by § 73.51(c) (2) when power is being determined by the indirect method.

(6) The entries required by § 17.49 (a), (b), and (c) of this chapter concerning daily observations of tower lights.

(b) Automatic devices accurately calibrated and with appropriate time, date and circuit functions may be utilized to record the entries in the operating log: *Provided*, That:

(1) They do not affect the operation of circuits or accuracy of indicating instruments of the equipment being recorded;

(2) The recording devices have an accuracy equivalent to the accuracy of the indicating instruments;

(3) The calibration is checked against the original indicators at least once a week and the results noted in the maintenance log;

(4) Provision is made to actuate automatically an aural alarm circuit located near the operator on duty if any of the automatic log readings are not within the tolerances or other requirements specified in the rules or instrument of authorization;

(5) Unless the alarm circuit operates continuously, devices which record each parameter in sequence must read each parameter at least once during each 10-minute period and clearly indicate the parameter being recorded;

(6) The automatic logging equipment is located at the remote control point if the transmitter is remotely controlled, or at the transmitter location if the transmitter is directly controlled;

(7) The automatic logging equipment is located in the near vicinity of the operator on duty and is inspected by him periodically during the broadcast day; and

(8) The indicating equipment conforms with the requirements of § 73.39 except that the scale need not exceed 2 inches in length. Arbitrary scales may not be used.

(c) In preparing the operating log, original data may be recorded in rough form and later transcribed into the log, but in such a case all portions of the original memoranda shall be preserved as a part of the complete log.

(d) Operating logs shall be changed or corrected only in the manner prescribed in § 73.111(c) and only in accordance with the following:

(1) *Manually kept log*. Any necessary corrections in a manually kept operating log shall be made only by the person making the original entry who shall make and initial each correction prior to signing the log when going off duty in accordance with § 73.111(a). If corrections or additions are made on the log after it has been so signed, explanation must be made on the log or on an attachment to it, dated and signed by either the operator who kept the log, the station technical supervisor or an officer of the licensee.

(2) *Automatic logging*. No automatically kept operating log shall be altered in any way after entries have been recorded. Any errors or omissions found in an automatically kept operating log shall be noted and explained in a memorandum signed by the operator on duty (who, under the provisions of paragraph (b)(7) of this section, is required to inspect the automatic equipment), or by the station technical supervisor or an officer of the licensee. Such memorandum shall be affixed to the original log in question.

(e) If required by § 73.93(h)(2)(iv), each completed operating log shall bear a signed and dated notation by the station's chief operator of the results of the review of that log.

[28 F.R. 13574, Dec. 14, 1963, as amended at 31 F.R. 750, Jan. 20, 1966; 33 F.R. 15419, Oct. 17, 1968; 33 F.R. 19821, Dec. 27, 1968; 34 F.R. 18305, Nov. 15, 1969; 37 F.R. 11546, June 8, 1972]

§ 73.114 Maintenance log.

(a) The following entries shall be made in the maintenance log:

(1) An entry, each week, of the following where applicable:

(i) A notation indicating the readings of the tower base current ammeter(s) and the associated remote antenna ammeter(s) (actual readings observed prior to remote antenna ammeter recalibration) and indicating calibration of the remote ammeter(s) against the tower base ammeter(s).

(ii) Time and result of test of auxiliary transmitter.

(iii) A notation of all frequency checks and measurements made independently of the frequency monitor and of the correlation of these measurements with frequency monitor indications.

(iv) A notation of the calibration check of automatic recording devices as required by § 73.113(b) (3).

(2) An entry of the data and time of removal from and restoration to service of any of the following equipment in the event it becomes defective:

(i) Modulation monitor.

(ii) Frequency monitor.

(iii) Final stage plate voltmeter.

(iv) Final stage plate ammeter.

(v) Base current ammeter(s).

(vi) Common point ammeter.

(3) The entries required by § 17.49(d) of this chapter concerning quarterly inspections of the condition of tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(4) Entries made so as to describe fully any experimental operation pursuant to § 73.10.

(5) Any other entries required by the current instrument of authorization of the station and the provisions of this subpart.

(6) If required by § 73.93(e)(3), the common point current, antenna base currents, sample loop currents or remote base currents, phase indications, and antenna base and sample loop current or remote antenna base current ratios and the percentage of deviation of these ratios from the authorized values.

(7) If required by the station authorization or § 73.93(e)(5), the results of field strength measurements at the monitoring points specified in the station authorization.

(b) Upon completion of the inspection required by § 73.93(e), the inspecting operator shall enter a signed statement that the required inspection has been made, noting in detail the tests, adjustments and repairs which were accomplished in order to insure operation in accordance with the provisions of this subpart and the current instrument of authorization of the station. The statement shall also specify the amount of time, exclusive of travel time to and from the transmitter, which was devoted to such inspection duties. If complete repair could not be effected, the statement shall set forth in detail the items of equipment concerned, the manner and degree in which they are defective, and the reason for failure to make satisfactory repairs.

(c) The inspecting operator shall sign and date the maintenance log at the conclusion of each inspection. In preparing the maintenance log, original data may be recorded in rough form and later transcribed into the log, but in such cases all portions of the original memorandum shall be preserved as a part of the complete log.

(d) Any necessary corrections in the maintenance log shall be made by the inspecting operator who shall initial and If corrections or additions are made on date all changes prior to signing the log. the log after it has been so signed, explanation must be made the subject of a separate memorandum, dated and signed by the operator who made the entry in question, or the station's technical supervisor or by an officer of the licensee. Such memorandum shall explain fully the circumstances surrounding the errors or ambiguities, and shall be affixed to the original log in question. If written and signed by other than the inspecting operator who made the entry, the memorandum shall contain a satisfactory explanation of why such signature is lacking.

[31 F.R. 750, Jan. 20, 1966, as amended at 33 F.R. 19821, Dec. 27, 1968; 37 F.R. 11546, June 8, 1972]

§ 73.115 Retention of logs.

Logs of standard broadcast stations shall be retained by the licensee or permittee for a period of 2 years: *Provided, however,* That logs involving communications incident to a disaster or which include communications incident to or involved in an investigation by the Commission and concerning which the licensee or permittee has been notified, shall be retained by the licensee or permittee until he is specifically authorized in writing by the Commission to destroy them: *Provided, further,* That logs incident to or involved in any claim or complaint of which the licensee or permittee has notice shall be retained by the licensee or permittee until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for the filing of suits upon such claims.

NOTE: Application forms for licenses and other authorizations require that certain operating and program data be supplied. It is suggested that these application forms be kept in mind in connection with maintenance of station program and operating records.

§ 73.116 Availability of logs and records.

The following shall be made available upon request by an authorized representative of the Commission:

(a) Program, operating and maintenance logs.

(b) Equipment performance measurements required by § 73.47.

(c) Copy of most recent antenna resistance or common-point impedance measurements submitted to the Commission.

(d) Copy of most recent field intensity measurements to establish performance of directional antennas required by § 73.151.

§ 73.117 Station identification.

See § 73.1201.

[34 F.R. 19762, Dec. 17, 1969]

§ 73.118 Mechanical reproductions.

(a) No mechanically reproduced program consisting of a speech, news event, news commentator, forum, panel discussion, or special event in which the element of time is of special significance, or any other program in which the element of time is of special significance and presentation of which would create either intentionally or otherwise, the impression or belief on the part of the listening audience that the event or program being broadcast is in fact occurring simultaneously with the broadcast, shall be broadcast without an appropriate announcement being made either at the beginning or end of such reproduction or at the beginning or end of the program in which such reproduction is used that it is a mechanical reproduction or a mechanically reproduced program: *Provided, however,* That each such program of one minute or less need not be announced as such.

(b) The exact form of identifying announcement is not prescribed, but the language shall be clear and in terms commonly used and understood. Any other program mechanically reproduced or series of mechanical reproductions, including a mechanical reproduction used for background music, sound effects, station identification, program identification (theme music of short duration) or identification of sponsorship of the program proper, need not be announced as provided in paragraph (a) of this section, but the licensee shall not attempt affirmatively to create the impression that any program being broadcast by mechanical reproduction consists of live talent.

(c) The requirements of paragraph (a) of this section are waived with respect to network programs, transcribed and rebroadcast at a later hour because of the time zone differentials between the place where the program originates and where it is rebroadcast, this waiver being applicable whether the off-the-line recording is made by the network itself at one of its key stations or by an individual station, but only when the broadcast. Each station which broadcasts at an hour not exceeding the time zone differential between the place where the program originates and where it is rebroadcast. Each station which broadcasts network programs at a later hour in accordance with this waiver shall make an appropriate announcement at least once each day between the hours of 10 a.m. and 10 p.m., stating that some or all of the network programs which are broadcast by that station are delayed broadcasts by means of transcription. This waiver provision also applies during the annual periods in which advanced time is effective with respect to network programs transcribed and rebroadcast one hour later because of the time differential resulting from the adoption or nonadoption of advanced time in some areas.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 4411, Mar. 12, 1968]

§ 73.119 Sponsored programs, announcement of.

(a) When a standard broadcast station transmits any matter for which money, services, or other valuable consideration is either directly or indirectly paid or promised to, or charged or received by, such station, the station shall broadcast an announcement that such matter is sponsored, paid for, or furnished, either in whole or in part, and by whom or on whose behalf such consideration was supplied: *Provided, however,* That "service or other valuable consideration" shall not include any service or property furnished without charge or at a nominal charge for use on, or in connection with, a broadcast unless it is so furnished in consideration for an identification in a broadcast of any person, product, service, trademark, or brand name beyond an identification which is reasonably related to the use of such service or property on the broadcast.

(b) The licensee of each standard broadcast station shall exercise reasonable diligence to obtain from its employees, and from other persons with whom it deals directly in connection with any program matter for broadcast, information to enable such licensee to make the announcement required by this section.

(c) In any case where a report (concerning the providing or accepting of valuable consideration by any person for inclusion of any matter in a program intended for broadcasting) has been made to a standard broadcast station, as required by section 508 of the Communications Act of 1934, as amended, of circumstances which would have required an announcement under this section had the consideration been received by such standard broadcast station, an appropriate announcement shall be made by such station.

(d) In the case of any political program or any program involving the discussion of public controversial issues for which any records, transcriptions, talent, scripts, or other material or services of any kind are furnished, either directly or indirectly, to a station as an inducement to the broadcasting of such program, an announcement shall be made both at the beginning and conclusion of such program on which such material or services are used that such records, transcriptions, talent, scripts, or other material or services have been furnished to such station in connection with the broadcasting of such program: *Provided, however,* That only one such announcement need be made in the case of any such program of 5 minutes' duration or less, which announcement may be made either at the beginning or conclusion of the program.

(e) The announcement required by this section shall fully and fairly disclose the true identity of the person or persons by whom or in whose behalf such payment is made or promised, or from whom or in whose behalf such services or other valuable consideration is received, or by whom the material or services referred to in paragraph (d) of this section are furnished. Where an agent or other person contracts or otherwise makes arrangements with a station on behalf of another, and such fact is known to the station, the announcement shall disclose the identity of the person or persons in whose behalf such agent is acting instead of the name of such agent.

(f) In the case of any program, other than a program advertising commercial products or services, which is sponsored, paid for, or furnished, either in whole or in part, or for which material or services referred to in paragraph (d) of this section are furnished, by a corporation, committee, association, or other unincorporated group, the announcement required by this section shall disclose the name of such corporation, committee, association, or other unincorporated group. In each such case the station shall require that a list of the chief executive officers or members of the executive committee or of the board of directors of the corporation, committee, association, or other unincorporated group shall be made available for public inspection at the studios or general offices of one of the standard broadcast stations carrying the program in each community in which the program is broadcast. Such lists shall be kept and made available for a period of 2 years.

(g) In the case of broadcast matter advertising commercial products or services, an announcement stating the sponsor's corporate or trade name, or the name of the sponsor's product, when it is clear that the mention of the name of the product constitutes a sponsorship identification, shall be deemed sufficient for the purposes of this section and only one such announcement need be made at any time during the course of the program.

(h) The announcements otherwise required by section 317 of the Communications Act of 1934, as amended, are waived with respect to the broadcast of "want ad" or classified advertisements sponsored by individuals. The waiver granted in this paragraph shall not extend to classified advertisements or want ads sponsored by any form of business enterprise, corporate or otherwise. Whenever sponsorship announcements are omitted pursuant to this paragraph the following conditions shall be observed:

(1) The licensee shall maintain a list showing the name, address, and (where available) the telephone number of each advertiser and shall attach this list to the program log for each day's operation; and

(2) Shall make this list available to members of the public who have a legitimate interest in obtaining the information contained in the list.

(i) Commission interpretations in connection with the provisions of this section may be found in the Commission's Public Notice entitled "Applicability of Sponsorship Identification Rules" (FCC 63–409; 28 F.R. 4732, May 10, 1963) and such supplements thereto as are issued from time to time.

(Sec. 317, 48 Stat. 1089, as amended; 47 U.S.C. 317) [28 F.R. 13574, Dec. 14, 1963, as amended at 32 F.R. 7916, June 1, 1967; 33 F.R. 15419, Oct. 17, 1968; 33 F.R. 18032, Dec. 4, 1968]

§ 73.120 Broadcasts by candidates for public office.

(a) *Definitions*. A "legally qualified candidate" means any person who has publicly announced that he is a candidate for nomination by a convention of a political party or for nomination or election in a primary, special, or general election, municipal, county, State or national, and who meets the qualifications prescribed by the applicable laws to hold the office for which he is a candidate, so that he may be voted for the electorate directly or by means of delegates or electors, and who:

(1) Has qualified for a place on the ballot or

(2) Is eligible under the applicable law to be voted for by sticker, by writing in his name on the ballot, or other method, and (i) has been duly nominated by a political party which is commonly known and regarded as such, or (ii) makes a substantial showing that he is a bona fide candidate for nomination or office, as the case may be.

(b) *General requirements*. No station licensee is required to permit the use of its facilities by any legally qualified candidate for public office, but if any licensee shall permit any such candidate to use its facilities, it shall afford equal opportunities to all other such candidates for that office to use such facilities: *Provided*, That such licensee shall have no power of censorship over the material broadcast by any such candidate.

(c) *Rates and practices*. (1) The rates, if any, charged all such candidates for the same office shall be uniform and shall not be rebated by any means direct or indirect. A candidate shall, in each case, be charged no more than the rate the station would charge if the candidate were a commercial advertiser whose advertising was directed to promoting its business within the same area as that encompassed by the particular office for which such person is a candidate. All discount privileges otherwise offered by a station to commercial advertisers shall be available upon equal terms to all candidates for public office.

(2) In making time available to candidates for public office no licensee shall make any discrimination between candidates in charges, practices, regulations, facilities, or services for or in connection with the service rendered pursuant to this part, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any licensee make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to broadcast to the exclusion of other legally qualified candidates for the same public office.

(d) *Records; inspection*. Every licensee shall keep and permit public inspection of a complete record of all requests for broadcast time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the licensee of such requests, and the charges made, if any, if request is granted. Such records shall be retained for a period of two years.

NOTE: See § 1.526 of this chapter.

(e) *Time of request*. A request for equal opportunities must be submitted to the licensee within 1 week of the day on which the first prior use, giving rise to the right to equal opportunities, occurred: *Provided, however*, That where a person was not a candidate at the time of such first prior use, he shall submit his request within 1 week of the first subsequent use after he has become a legally qualified candidate for the office in question.

(f) *Burden of proof.* A candidate requesting such equal opportunities of the licensee, or complaining of non-compliance to the Commission shall have the burden of proving that he and his opponent are legally qualified candidates for the same public office.

(Sec. 315, 48 Stat. 1088, as amended, 47 U.S.C. 315) [28 F.R. 13574, Dec. 14, 1963, as amended at 30 F.R. 4547, Apr. 8, 1965; 35 F.R. 7120, May 6, 1970]

§ 73.121 Rebroadcast.

(a) The term "rebroadcast" means reception by radio of the programs of a radio station, and the simultaneous or subsequent retransmission of such programs by a broadcast station.

NOTE 1: As used in § 73.121, "program" includes any complete program or part thereof, or any signals if other than A–3 emission.

NOTE 2: In case a program is transmitted from its point of origin to a broadcast station entirely by common carrier facilities, whether by wire line or radio, the transmission of this program is not considered a rebroadcast.

(b) Standard broadcast stations may, without further authority from the Commission, rebroadcast programs originated by other U.S. standard and FM broadcast stations: *Provided,* That the Commission is notified in writing of the call letters of each station rebroadcast, together with certification that the originating station(s) has consented to the rebroadcast(s). However, the requirements of this paragraph do not apply to emergency rebroadcasting conducted pursuant to § 73.971(b), which provides unrestricted AM/FM/TV rebroadcast privileges for stations utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan.

NOTE: The notice and certification of consent shall be given within 3 days of any single rebroadcast, but in case of the regular practice of rebroadcasting certain programs of a standard broadcast station several times during a license period, notice and certification of consent shall be given for the ensuing license period with the application for renewal of license, or at the beginning of such rebroadcast practice if begun during a license period.

(c) (1) The licensee of the standard broadcast station located within a state or the District of Columbia, may, without further authority of the Commission rebroadcast on a noncommercial basis a noncommercial program of a United States international broadcast station.

(2) The licensee of a standard broadcast station located in any territory or insular possession of the United States may, without further authority of the Commission, rebroadcast any program of a United States international broadcast station.

(3) In the case of any rebroadcast under the provisions of this paragraph, the Commission shall be notified of the call letters of each station whose programs are rebroadcast and the licensee shall certify that express authority has been received from the licensee of the station originating the program.

(d) No licensee of a standard broadcast station shall rebroadcast the program of any other class of United States radio station without written authority having first been obtained from the Commission upon application accompanied by written consent or certification of consent of the licensee of the station originating the program.

NOTE 1: The broadcasting of a program relayed by a remote pick-up broadcast station (§ 74.401 of this chapter) is not considered a rebroadcast.

NOTE 2: Informal application may be employed.

NOTE 3: By Order No. 82, dated and effective June 24, 1941, until further order of the Commission, § 73.121(d) is suspended only insofar as it requires prior written authority of the Commission for the rebroadcasting of programs originated for that express purpose by United States Government radio stations.

(e) In case of a program rebroadcast by several standard broadcast stations, such as a chain rebroadcast, the person legally responsible for distributing the program or the network facilities may obtain the necessary authorization for the entire rebroadcast both from the Commission and from the person or licensee of the station originating the program.

(f) Attention is directed to section 325 (b) of the Communications Act of 1934, which reads as follows (see also § 1.545 of this chapter):

> No person shall be permitted to locate, use, or maintain a radio broadcast studio or other place or apparatus from which or whereby sound waves are converted into electrical energy, or mechanical or physical reproduction of sound waves produced, and caused to be transmitted or delivered to a radio station in a foreign country for the purpose of being broadcast from any radio station there, having a power output of sufficient intensity, and/or being so located geographically that its emissions may be received consistently in the United States, without first obtaining a

permit from the Commission upon proper application therefor.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325) [28 F.R. 13574, Dec. 14, 1963, as amended at 31 F.R. 10887, Aug. 16, 1966; 33 F.R. 7491, May 21, 1968; 33 F.R. 15419, Oct. 17, 1968; 34 F.R. 18802, Nov. 25, 1969]

§ 73.122 Lotteries.

(a) An application for construction permit, license, renewal of license, or any other authorization for the operation of a broadcast station, will not be granted where the applicant proposes to follow or continue to follow a policy or practice of broadcasting or permitting "the broadcasting of, any advertisement of or information concerning any lottery, gift enterprise, or similar scheme, offering prizes dependent in whole or in part upon lot or chance, or any list of the prizes drawn or awarded by means of any such lottery, gift enterprise, or scheme, whether said list contains any part or all of such prizes." (See 18 U.S.C. 1304.)

(b) The determination whether a particular program comes within the provisions of paragraph (a) of this section depends on the facts of each case. However, the Commission will in any event consider that a program comes within the provisions of paragraph (a) of this section if in connection with such program a prize consisting of money or thing of value is awarded to any person whose selection is dependent in whole or in part upon lot or chance, if as a condition of winning or competing for such prize, such winner or winners are required to furnish any money or thing of value or are required to have in their possession any product sold, manufactured, furnished or distributed by a sponsor of a program broadcast on the station in question.

(Sec. 1304, 62 Stat. 763, 18 U.S.C. 1304)

§ 73.123 Personal attacks; political editorials.

(a) When, during the presentation of views on a controversial issue of public importance, an attack is made upon the honesty, character, integrity or like personal qualities of an identified person or group, the licensee shall, within a reasonable time and in no event later than 1 week after the attack, transmit to the person or group attacked (1) notification of the date, time and identification of the broadcast; (2) a script or tape (or an accurate summary if a script or tape is not available) of the attack; and (3) an offer of a reasonable opportunity to respond over the licensee's facilities.

(b) The provisions of paragraph (a) of this section shall not be applicable (1) to attacks on foreign groups or foreign public figures; (2) to personal attacks which are made by legally qualified candidates, their authorized spokesmen, or those associated with them in the campaign, on other such candidates, their authorized spokesmen, or persons associated with the candidates in the campaign; and (3) to bona fide newscasts, bona fide news interviews, and on-the-spot coverage of a bona fide news event (including commentary or analysis contained in the foregoing programs, but the provisions of paragraph (a) of this section shall be applicable to editorials of the licensee).

NOTE: The fairness doctrine is applicable to situations coming within (b)(3), above, and, in a specific factual situation, may be applicable in the general area of political broadcasts (b)(2), above. See, section 315(a) of the Act, 47 U.S.C. 315(a); Public Notice: *Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance.* 29 F.R. 10415. The categories listed in (b)(3) are the same as those specified in section 315(a) of the Act.

(c) Where a licensee, in an editorial, (i) endorses or (ii) opposes a legally qualified candidate or candidates, the licensee shall, within 24 hours after the editorial, transmit to respectively (i) the other qualified candidate or candidates for the same office or (ii) the candidate opposed in the editorial (1) notification of the date and the time of the editorial; (2) a script or tape of the editorial; and (3) an offer of a reasonable opportunity for a candidate or a spokesman of the candidate to respond over the licensee's facilities: *Provided, however,* That where such editorials are broadcast within 72 hours prior to the day of the election, the licensee shall comply with the provisions of this paragraph sufficiently far in advance of the broadcast to enable the candidate or candidates to have a reasonable opportunity to prepare a response and to present it in a timely fashion.

[32 F.R. 10305, July 13, 1967, as amended at 33 F.R. 5364, Apr. 4, 1968]

§ 73.124 Fraudulent billing practices.

See § 73.1205 which is applicable to all standard broadcast stations.

[35 F.R. 7900, May 22, 1970]

§ 73.125 Equal employment opportunities.

(a) *General policy*. Equal opportunity in employment shall be afforded by all licensees or permittees of commercially or noncommercially operated standard, FM, television or international broadcast stations (as defined in this part) to all qualified persons, and no person shall be discriminated against in employment because of race, color, religion, national origin or sex.

(b) *Equal employment opportunity program*. Each station shall establish, maintain and carry out, a positive continuing program of specific practices designed to assure equal opportunity in every aspect of station employment policy and practice. Under the terms of its program, a station shall:

(1) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(2) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(3) Communicate the station's equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin or sex, and solicit their recruitment assistance on a continuing basis.

(4) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon race, color, religion, national origin or sex, from the station's personnel policies and practices and working conditions.

(5) Conduct continuing review of job structure and employment practices and adopt positive recruitment, training, job design and other measures needed in order to insure genuine equality of opportunity to participate fully in all organizational units, occupations and levels of responsibility in the station.

(c) Applicants for construction permit for a new facility, for assignment of license or construction permit or for transfer of control (other than pro forma or involuntary assignments and transfers), and applicants for renewal of license who have not previously done so, shall file with the Commission programs designed to provide equal employment opportunities for Negroes, orientals, American Indians, Spanish-surnamed Americans, and women, or amendments to such programs. Guidelines for the preparation of such programs are set out in section VI of the appropriate application forms. See 32 FCC 2d ——. A program need not be filed by any station having less than five full-time employees or with respect to any minority group which is represented in such insignificant numbers in the area that a program would not be meaningful. In the latter situation, a statement of explanation should be filed.

(Secs. 308–10, 48 Stat., as amended 1084–1086; 47 U.S.C. 308–10) [35 F.R. 8827, June 6, 1970, as amended at 36 F.R. 25013, Dec. 28, 1971]

§ 73.126 Broadcast of telephone conversations.

See § 73.1206 which is applicable to all standard broadcast stations.

[35 F.R. 7733, May 20, 1970]

LICENSING POLICIES

§ 73.131 Exclusive affiliation of station.

No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, broadcasting the programs of any other network organization. (The term "network organization" as used herein includes national and regional network organizations. See ch. VII, J, of Report on Chain Broadcasting, FCC Order No. 37 (Docket 5060), May 1941.)

[33 F.R. 15419, Oct. 17, 1968]

§ 73.132 Territorial exclusivity.

No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which prevents or hinders another station serving substantially the same area from broadcasting the network's programs not taken by the former station, or which prevents or hinders another station serving a substantially different area from broadcasting any program of the network organization. This section shall not be construed to prohibit any contract, arrangement, or understanding between a station and a network organization pursuant to which the station is granted the first call in its primary service area upon the programs of the network organization.

§ 73.133 Term of affiliation.

No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which provides, by original term, provisions for renewal, or otherwise for the affiliation of the station with the network organization for a period longer than 2 years: *Provided*, That a contract, arrangement, or understanding for a period up to 2 years, may be entered into within six months prior to the commencement of such period.

§ 73.134 Option time.

No license shall be granted to a standard broadcast station which options for network programs any time subject to call on less than 56 days' notice, or more time than a total of 3 hours within each of four segments of the broadcast day, as herein described. The broadcast day is divided into four segments, as follows: 8 a.m. to 1 p.m.; 1 p.m. to 6 p.m.; 6 p.m. to 11 p.m.; 11 p.m. to 8 a.m. (These segments are to be determined for each station in terms of local time at the location of the station but may remain constant throughout the year regardless of shifts from nonadvanced to advanced time or vice versa) Such option may not be exclusive as against other network organizations and may not prevent or hinder the station from optioning or selling any or all of the time covered by the option, or other time, to other network organizations.

NOTE 1: As used in this section, an option is any contract, arrangement, or understanding, express or implied, between a station and a network organization which prevents or hinders the station from scheduling programs before the network agrees to utilize the time during which such programs are scheduled, or which requires the station to clear time already scheduled when the network organization seeks to utilize the time.

NOTE 2: All time options permitted under this section must be for specified clock hours, expressed in terms of any time system set forth in the contract agreed upon by the station and network organization. Shifts from advanced to nonadvanced time or vice versa may or may not shift the specified hours correspondingly as agreed by the station and network organization.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 4411, Mar. 12, 1968]

§ 73.135 Right to reject programs.

No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which (a) with respect to programs offered pursuant to an affiliation contract, prevents or hinders the station from rejecting or refusing network programs which the station reasonably believes to be unsatisfactory or unsuitable; or which (b) with respect to network programs so offered or already contracted for, prevents the station from rejecting or refusing any program which, in its opinion, is contrary to the public interest, or from substituting a program of outstanding local or national importance.

§ 73.136 Network ownership of stations.

No license shall be granted to a network organization, or to any person directly or indirectly controlled by or under common control with a network organization, for more than one standard broadcast station where one of the stations covers substantially the service area of the other station, or for any standard broadcast station in any locality where the existing standard broadcast stations are so few or of such unequal desirability (in terms of coverage, power, frequency, or other related matters) that competition would be substantially restrained by such licensing. (The word "control" as used herein is not limited to full control but includes such a measure of control as would substantially affect the availability of the station to other networks.)

NOTE: Effective date of this section with respect to any station may be extended from time to time in order to permit the orderly disposition of properties; and it shall be suspended indefinitely with respect to regional network organizations.

§ 73.137 Dual network operation.

No license shall be issued to a standard broadcast station affiliated with a network organization which maintains more than one network of standard broadcast stations: *Provided*, That this section shall not be applicable if such networks are not operated simultaneously, or if there is no substantial overlap in the territory served by the group of stations comprising each such network.

[33 F.R. 15419, Oct. 17, 1968]

§ 73.138 Control by networks of station rates.

No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, fixing or altering its rates for the sale of broadcast time for other than the network's programs.

§ 73.139 Special rules relating to contracts providing for reservation of time upon sale of a station.

No license, renewal of license, assignment of license, or transfer of control of a corporate licensee shall be granted or authorized to a standard broadcast station which has a contract, arrangement or understanding, express or implied, pursuant to which, as consideration or partial consideration for the assignment of license or transfer of control, the assignor of a station license or the transferor of stock, where transfer of a corporate licensee is involved or the nominee of such assignor or transferor retains any right of reversion of the license or any right to the reassignment of the license in the future, or reserves the right to use the facilities of the station for any period whatsoever.

DATA AND MEASUREMENTS

§ 73.150 Directional antenna systems.

(a) For each station employing a directional antenna, all determinations of service provided and interference caused shall be based on the inverse fields shown on the standard radiation pattern for that station. As applied to nighttime operation the term "standard radiation pattern" shall include the radiation pattern in the horizontal (ground) plane, and radiation patterns at angles above this plane, as required by paragraph (b)(1) of this section.

(b) The following data shall be submitted with an application for authority to install a directional antenna:

(1) The standard radiation pattern for the proposed antenna in the horizontal plane, and where pertinent, azimuthal radiation patterns for angles of elevation up to and including 60°, with a separate pattern for each increment of 5°.

(i) The standard radiation pattern shall be constructed in accordance with the following mathematical expression:

$$E(\emptyset,\theta)_{std}=1.05\ [(E(\emptyset,\theta)^2_{th}+Q^2]^{1/2}$$

where:

$E(\emptyset,\theta)_{std}$ represents the inverse fields at one mile which are deemed to be produced by the directional antenna in the horizontal and vertical planes.

$E(\emptyset,\theta)_{th}$ represents the expression which determines the basic pattern shape and size. It shall be developed with a lumped loss resistance of not less than 1 ohm assumed to exist at the current loop of each element of the directional array, or at the base of any element of less than 90° in electrical height. An application proposing an antenna design incorporating a loss resistance greater than 1 ohm will be accepted only if it includes an adequate technical justification for the employment of the greater value.

Q is the greater of the following quantities:

$$0.025f(\theta)E_{rss} \text{ or}$$
$$6.0f(\theta)(P_{kw})^{1/2}$$

where:

$f(\theta)$ is the vertical field distribution factor for the shortest tower in the array (see § 73.190, Figure 5).

E_{rss} is the root sum square value of the amplitudes of the inverse fields of the elements of the array in the horizontal plane, as used in the expression for $(E\emptyset,\theta)_{th}$.

P_{kw} is the input power to the array, expressed in kilowatts, with $P_{kw}=1$, for input power of 1 kilowatt or less.

(ii) Where the orthogonal addition of the factor Q to $E(\emptyset,\theta)_{th}$ results in a standard pattern whose minimum fields are lower than those found necessary or desirable, these fields may be increased by appropriate adjustment of the parameters of $E(\emptyset,\theta)_{th}$.

(2) The horizontal pattern shall be plotted to the largest scale possible on letter-size polar coordinate paper (main engraving approximately 7" x 10") using only scale divisions and subdivisions having 1, 2, 2.5, or 5 times 10^{nth}, and oriented with the zero degree point corresponding to true North. Patterns for elevation angles above the horizontal plane, may be plotted in polar or rectangular coordinates with the pattern for each angle of elevation drawn on a separate page. Minor lobe and null detail occurring between successive patterns for specific angles of elevation need not be submitted. Values of field intensity less than 10 percent of the effective field intensity of any pattern shall be shown on an enlarged scale. The direction and distance shall be indicated on the horizontal plane pattern toward each existing station with which interference may be involved.

NOTE: All directions shall be determined by accurate computation or from a Lambert Conformal Conic Projection Map, such as U.S. Coast and Geodetic Survey Map No. 3060, or a map of equal accuracy, and all distances shall be determined by accurate computation or from United States Albers Equal Area Projection Map, scale 1/2,500,000, or a map of equal accuracy. These maps may be obtained from the United States Geological Survey, Department of the Interior, Washington, D.C. 20240, and the United States Coast and Geodetic Survey, Department of Commerce, Washington, D.C. 20235.

(3) The effective (RMS) field intensity in the horizontal plane of $E(\phi,\theta)_{std}$, $E(\phi,\theta)_{th}$ and the root sum square (RSS) value of the inverse fields of the array elements at 1 mile, derived from the equation for $E(\phi,\theta)_{th}$. These values shall be tabulated on the page on which the horizontal plane pattern is plotted, which shall be specifically labeled as the Standard Horizontal Plane Pattern.

(4) Physical description of the array, showing:

(i) Number of elements.

(ii) Type of each element (i.e., guyed or self-supporting, uniform cross section or tapered (specifying base dimensions), grounded or insulated, etc.)

(iii) Details of top loading, or sectionalizing, if any.

(iv) Height of radiating portion of each element in feet (height above base insulator, or base, if grounded).

(v) Overall height of each element above ground.

(vi) Sketch of antenna site, indicating its dimensions, the location of the antenna elements thereon, their spacing from each other, and their orientation with respect to each other and to true north, the number and length of the radials in the ground system about each element, the dimensions of ground screens, if any, and bonding between towers and between radial systems.

(5) Electrical description of the array, showing:

(i) Relative amplitudes of the fields of the array elements.

(ii) Relative time phasing of the fields of the array elements in degrees leading [+] or lagging [−].

(iii) Space phasing between elements in degrees.

(iv) All assumptions made and the basis therefor, particularly with respect to the electrical height of the elements, current distribution along elements, efficiency of each element, and ground conductivity.

(v) Formulas used for computing $E(\phi,\theta)_{th}$ and $E(\phi,\theta)_{std}$ together with sample computations.

(vi) Complete tabulation of final computed data used in plotting patterns, including data for the determination of the RMS value of the pattern, and the RSS field of the array.

(6) Any additional information required by the application form.

[36 F.R. 919, Jan. 20, 1971, as amended at 37 F.R. 529, Jan. 13, 1972]

§ 73.151 Field strength measurements to establish performance of directional antennas.

(a) In addition to the information required by the license application form, the following showing must be submitted to establish for each mode of directional operation, that the effective measured field strength (RMS) at 1 mile is not less than 85 percent of the effective field strength specified for the standard radiation pattern for that mode of directional operation, or less than that specified in § 73.189(b) for the class of station involved, whichever is the higher value, and that the measured field strength at 1 mile in any direction does not exceed the field shown in that direction on the standard radiation pattern for that mode of directional operation:

(1) A tabulation of inverse field intensities in the horizontal plane at 1 mile, as determined from field strength measurements taken and analyzed in accordance with § 73.186, and a statement of the effective field intensity (RMS), based on these measurements. Measurements shall be made in at least the following directions:

(i) Those specified in the instrument of authorization.

(ii) In major lobes. Generally at least three radials are necessary to establish a major lobe; however, additional radials may be required.

(iii) Along sufficient number of other radials to establish the effective field. In the case of a relatively simple directional antenna pattern, approximately five radials in addition to those in subdivision (i) and (ii) of this subparagraph are sufficient. However, when more complicated patterns are involved, that is, patterns having several or sharp lobes or nulls, measurements shall be taken along as many radials as may be necessary, to definitely establish the pattern(s).

(2) A tabulation of:

(i) The phase difference of the current in each other element with respect to the reference element, and whether the current leads (+) or lags (−) the current in the reference element, as indicated by the station's phase monitor.

(ii) The ratio of the amplitude of the current in each other element to the current in the reference element, as indicated on the station's phase monitor.

(iii) The value of the current at the base of each element, as read from the thermoammeter installed at the base of the element, and the ratio of the base current in each other element to the base current in the reference element. If there are substantial differences between the ratios established in subdivision (ii) of this subparagraph and the ratios computed in this subdivision (iii) and/or if there are substantial differences between the parameters established in subdivisions (i) and (ii) of this subparagraph and this subdivision (iii), and those used in the design of the standard radiation pattern, a full explanation of the reasons for these differences shall be given.

(3) The 25 and 5 mv/m field intensity contours and the nighttime interference-free contour, when the pattern is for nighttime operation, as well as any other contours specified by the instrument of authorization, plotted on a map which has the largest practical scale. These contours need not be shown for distances greater than 20 miles from the antenna except that the field intensity contours on the far side of the business and residential areas of the city in which the main studio is located shall be shown. When the station is limited by interference within the 5 mv/m contour the latter contour need not be shown. In the event the 5 mv/m contour includes and extends beyond the city and beyond 20 miles, the highest signal intensity contour that entirely includes the city may be plotted in lieu of the 5 mv/m contour; in the event that the 5 mv/m contour does not include the city, the contour of highest signal intensity encompassing the city shall be plotted in addition to the 5 mv/m contour.

(4) The actual field intensity measured at each monitoring point established in the various directions for which a limiting field was specified in the instrument of authorization together with accurate and detailed description of each monitoring point together with ordinary snapshots, clear and sharp, taken with the field intensity meter in it's measuring position and with the camera so located that its field of view takes in as many pertinent landmarks as possible. In addition, the directions for proceeding to each monitoring point together with a rough sketch or map upon which has been indicated the most accessible approaches to the monitoring points should be submitted.

[36 F.R. 919, Jan. 20, 1971]

§ 73.152 Modification of directional antenna data.

(a) If, after construction and final adjustment of a directional antenna, a measured inverse field at 1 mile in any direction exceeds the field shown on the standard radiation pattern for the pertinent mode of directional operation, an application shall be filed for a modification of permit, specifying a modified standard radiation pattern and/or such changes as may be required in operating parameters so that all measured effective fields will be contained within the standard radiation pattern. The following general principles shall govern such a situation:

(1) Where an excessive measured field in any direction will result in objectionable interference to another station which would not be computed if the standard pattern field in that direction were employed, the application shall specify the level at which the input power to the antenna shall be limited to maintain the measured field at a value not in excess of that shown on the standard pattern. and shall specify the common point current corresponding to this power level. This value of common point current will be specified on the license for that station.

(2) Where any excessive measured field does not result in objectionable interference to another station a modified standard radiation pattern shall be submitted, encompassing all measured fields, and shall supersede the previously submitted standard radiation pattern for that station in the pertinent mode of directional operation.

NOTE: Where measured fields exceed the values shown on the standard radiation pattern, but objectionable interference does not result, and, accordingly, a modified standard radiation pattern is submitted, the modified pattern may be larger than the original pattern (have a higher RMS value) if the measured fields systematically exceed the confines of the original pattern, or, where the measured field exceeds the pattern in discrete directions, may be expanded over sectors including these directions. A combination of both types of expansion may sometimes be desirable. Where sector expansion, or "augmentation" is desired, it shall be achieved by application of the following equation:

$$E_a = \left[E_1^2 + \overline{Qf(\theta) \cos \left(180 \frac{DA}{S} \right)}^2 \right]^{1/2}$$

where:

E_1 is the standard pattern field at some particular azimuth and elevation angle, before augmentation.

E_2 is the field in the direction specified above, after augmentation.

$Q=(E_2^2-E_1^2)^{1/2}$ in which the fields are those in the horizontal plane at an azimuth where the maximum degree of augmentation is applied.

$f(\theta)$ is the vertical plane distribution factor for the shortest element in the array (see § 73.190, Figure 5).

S is the angular range, or "span" over which augmentation is applied. At the limits of the "span" the augmented pattern sector merges into the unaugmented pattern.

D_A is the absolute horizontal angle between the azimuth at which the augmented pattern value is being computed, and the azimuth at which the maximum augmentation occurs. (D_A cannot exceed ½ S)

(3) A Modified Standard Radiation Pattern shall be specifically labeled as such, and shall be plotted in accordance with the requirements of subparagraph (2) of paragraph (b) of § 73.150. The effective (RMS) field intensity in the horizontal plane of $E(\phi,\theta)_{std}$, $E(\phi,\theta)_{th}$, and the root sum square (RSS) value of the inverse fields of the array elements at 1 mile derived from the equation for $E(\phi,\theta)_{th}$, shall be tabulated on the page on which the horizontal plane pattern is plotted. Where sector augmentation has been employed in designing the modified pattern, the direction of maximum augmentation shall be indicated on the horizontal plane pattern for each augmented sector, and the limits of each sector. Field values within an augmented sector, computed prior to augmentation, shall be depicted by a broken line.

(4) There shall be submitted, for each modified standard pattern, complete tabulations of final computed data used in plotting the pattern. The data used in plotting each augmented sector shall be separately tabulated.

[36 F.R. 920, Jan. 20, 1971, as amended at 37 F.R. 529, Jan. 13, 1972]

§ 73.153 Field intensity measurements in support of applications or evidence at hearings.

In the determination of interference, groundwave field intensity measurements will take precedence over theoretical values, provided such measurements are properly taken and presented. When measurements of groundwave signal intensity are presented, they shall be sufficiently complete in accordance with § 73.186 to determine the field intensity at 1 mile in the pertinent directions for that station.

NOTE: The antenna resistance measurements required by § 73.186 need not be taken or submitted.

[28 F.R. 13574, Dec. 14, 1963. Redesignated at 36 F.R. 920, Jan. 20, 1971]

STANDARD BROADCAST TECHNICAL STANDARDS

§ 73.181 Introduction.

(a) There are presented in the following sections of this subpart the Technical Standards giving interpretations and further considerations concerning the technical rules and regulations governing standard broadcast stations. These standards have been approved by the Commission and reflect the opinion of the Commission in all matters involved

NOTE: See also § 73.28.

(b) The Technical Standards set forth in the following sections are those deemed necessary for the construction and operation of standard broadcast stations to meet the requirements of technical regulations set forth above and for operation in the public interest along technical lines not specifically enunciated above. These standards are based on the best engineering data available from evidence supplied in formal and informal hearings and extensive surveys conducted in the field by the Commission's personnel. Numerous informal conferences have been held with radio engineers, manufacturers of radio equiment and others for the guidance of the Commission in the formulation of these standards.

(c) These standards supersede any previous announcements or policies which may have been enunciated by the Commission on engineering matters concerning standard broadcast stations.

(d) While these standards provide for flexibility and set forth the conditions under which they are applicable, it is not expected that material deviation therefrom as to fundamental principles will be recognized unless full information is submitted as to the reasonableness of such departure and the need therefor.

(e) These standards will necessarily change as progress is made in the art, and accordingly it will be necessary to make revisions from time to time. The Commission will accumulate and analyze engineering data available as to the progress of the art so that its standards may be kept current with the developments.

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 4411, Mar. 12, 1968]

§ 73.182 Engineering standards of allocation.

(a) Sections 73.21 to 73.34, inclusive, govern allocation of facilities in the standard broadcast band of 535 to 1605 kc/s. Section 73.21 establishes three classes of channels in this band, namely, clear channels for the use of high-powered stations, regional channels for the use of medium-powered stations, and local channels for the use of low-powered stations. The classes and power of standard broadcast stations which will be assigned to the various channels are set forth in § 73.21. The classification of the standard broadcast stations are as follows:

(1) Class I stations are dominant stations operating on clear channels with powers of not less than 10 or more than 50 kw. These stations are designed to render primary and secondary service over an extended area and at relatively long distances, hence have their primary service areas free from objectionable interference from other stations on the same and adjacent channels and secondary service areas free from objectionable interference from stations on the same channels. (The secondary service area of a Class I station is not protected from adjacent channel interference. However, if it is desired to make a determination of the area in which adjacent channel groundwave interference (10 kc/s removed) to skywave service exists, it may be considered as the area where the ratio of the desired 50% skywave of the Class I station to the undesired groundwave of a station 10 kc/s removed is 1 to 4.) From an engineering point of view, Class I stations may be divided into two groups and, hereafter, for the purpose of convenience, the two groups of Class I stations will be termed Class I–A or I–B in accordance with the assignment to channels allocated by § 73.25 (a) or (b).

(i) The Class I stations in Group I–A are those assigned to the channels allocated by § 73.25(a), on which, except to the extent provided by that section and by § 73.22, duplicate nighttime operation is not permitted. The power of these stations shall be 50 kilowatts. The Class I stations in this group are afforded protection as follows:

Daytime: To the 0.1 mv/m groundwave contour from stations on the same channel, and to the 0.5 mv/m groundwave contour from stations on adjacent channels.

Nighttime: To the 0.5 mv/m, 50 percent skywave contour from stations on the same channel, and to the 0.5 mv/m groundwave contour from stations on adjacent channels.

(ii) The Class I stations in group I–B are those assigned to the channels allocated by § 73.25(b), on which duplicate operation is permitted, that is, other Class I or Class II stations operating unlimited time may be assigned to such channels. During nighttime hours of operation a Class I station of this group is protected to the 500 uv/m 50 percent skywave contour and during daytime hours of operation to the 100 uv/m groundwave contour from stations on the same channel. Protection is given to the 500 uv/m groundwave contour from stations on adjacent channels for both day and nighttime operation. The operating powers of Class I stations on these frequencies shall be not less than 10 kw nor more than 50 kw.

(2) Class II stations are secondary stations which operate on clear channels with powers not less than 0.25 kw nor more than 50 kw, except that Class II–A stations shall not operate nighttime with less than 10 kw. Class II stations are required to use a directional antenna or other means to avoid causing interference within the normally protected service areas of Class I stations or other Class II stations (for special rules and standards concerning Class II–A stations, see § 73.22). These stations normally render primary service only, the area of which depends on the geographical location, power, and frequency. This may be relatively large but is limited by and subject to such interference as may be received from Class I stations. However, it is recommended that Class II stations be so located that the interference received from other stations will not limit the service area to greater than the 2.5 mv/m groundwave contour nighttime and 0.5 mv/m groundwave contour daytime, which are the values for the mutual protection of this class of stations with other stations of the same class (except that Class II–A stations are normally protected to their 0.5 mv/m groundwave contour daytime, and nighttime to the limit imposed by the co-channel Class I–A station).

(3) Class III stations operate on regional channels and normally render primary service to the larger cities and the rural area contiguous thereto, and are subdivided into two classes:

(i) Class III-A stations which operate with powers not less than 1 kw or more than 5 kw are normally protected to the 2500 uv/m groundwave contour nighttime and the 500 uv/m groundwave contour daytime.

(ii) Class III-B stations which operate with powers not less than 0.5 kw, or more than 1 kw nighttime and 5 kw daytime are normally protected to the 4000 uv/m groundwave contour nighttime and 500 uv/m groundwave contour daytime.

NOTE: In NARBA and the U.S./Mexican Agreement, no distinction is made between Class III-A and Class III-B stations.

(4) Class IV stations operate on local channels, normally rendering primary service only to a city or town and the suburban or rural areas contiguous thereto, with powers not less than 250 watts, nor more than 250 watts nighttime and 1 kilowatt daytime (for restrictions on daytime power of local stations located near the Mexican border or in an area within the State of Florida, see § 73.21 (c)). Such stations are normally protected to the 0.5 mv/m contour daytime. On local channels the separation required for the daytime protection shall also determine the nighttime separation. Where directional antennas are employed daytime by Class IV stations operating with more than 250 watts power, the separations required shall in no case be less than those necessary to afford protection, assuming nondirectional operation with 250 watts. In no case will 250 watts nighttime operation be authorized to a station unable to operate nondirectionally at 250 watts in the daytime. The actual nighttime limitation will be calculated.

NOTE: The following approximate method may be used. It is based on the assumption of 0.25 wavelength antenna height and 88 mv/m at one mile effective field for 250 watts power, using the 10% skywave field intensity curve of Figure 2 of § 73.190. Zones defined by circles of various radii specified below are drawn about the desired station and the interfering 10% skywave signal from each station in a given zone is considered to be the value tabulated below. The effective interfering 10% skywave signal is taken to be the RSS value of all signals originating within these zones. (Stations beyond 500 miles are not considered.)

Zone	Inner radius	Outer radius	10 percent skywave signal (mv/m)
A	....	60	0.10
B	60	80	.12
C	80	100	.14
D	100	250	.16
E	250	350	.14
F	350	450	.12
G	450	500	.10

Where the power of the interfering station is not 250 watts, the 10% skywave signal should be adjusted by the square root of the ratio of the power to 250 watts.

(b) The class of any station is determined by the channel assignment, the power, and the field intensity contour to which it renders service free of interference from other stations as determined by these standards. No station will be permitted to change to a class normally protected to a contour of less intensity than the contour to which the station actually renders interference-free service. Any station of a class normally protected to a contour of less intensity than that to which the station actually renders interference-free service, will be automatically reclassified according to the class normally protected, the minimum consistent with its power and channel assignment. Likewise, any station to which the interference is reduced so that service is rendered to a contour normally protected for a higher class will be automatically changed to that class if consistent with its power and channel assignment.

(c) [Reserved]

(d) When a station is already limited by interference from other stations to a contour of higher value than that normally protected for its class, this contour shall be the established standard for such station with respect to interference from all other stations.

(e) The several classes of broadcast areas. Class II stations render service to a primary area but the secondary and intermittent service areas. (See § 73.11 for the definitions of primary, secondary, and intermittent service areas.) Class I stations render service to all three service areas. Class II stations render service to a primary area but the secondary and intermittent service areas may be materially limited or destroyed due to interference from other stations depending on the station assignments involved. Class III and IV stations usually have only primary service areas as interference from other stations generally prevents any secondary service and may limit the intermittent service area. However, complete intermittent service may be obtained in many cases depending on the station assignments involved.

(f) The signals necessary to render primary service to different types of service areas are as follows:

Area	*Field intensity groundwave*[1]
City business or factory areas	10 to 50 mv/m.
City residential areas	2 to 10 mv/m.
Rural—all areas during winter or northern areas during summer	0.1 to 0.5 mv/m.
Rural—southern areas during summer	0.25 to 1.0 mv/m.

All these values are based on an absence of objectionable fading, either in changing intensity or selective fading, the usual noise level in the area, and an absence of limiting interference from other broadcast stations. The values apply both day and night but generally fading or interference from other stations limits the primary service at night in all rural areas to higher values of field intensity than the values given. The Commission will authorize a directive antenna for a Class IV station for daytime operation only with power in excess of 250 watts. In computing the degrees of protection which such antenna will afford, the radiation produced by this antenna shall be assumed to be no less, in any direction, than that which would result from nondirectional operation, utilizing a single element of the directional array, with 250 watts.

NOTE: Standards have not been established for interference from atmospherics or man-made electric noise as no uniform method of measuring noise or static has been established. In any individual case objectionable interference from any source, except other broadcast signals, may be determined by comparing the actual noise interference reproduced during reception of a desired broadcast signal to the degree of interference that would be caused by another broadcast signal within 20 cycles of the desired signal and having a carrier ratio of 20 to 1 with both signals modulated 100 percent on peaks of usual programs. Standards of noise measurements and interference ratio for noise are now being studied.

(g) In determining the population of the primary service area, it may be considered that the following signals are satisfactory to overcome man-made noise in towns of the population given.

Population:	*Field intensity groundwave*
Up to 2,500	0.5 mv/m
2,500 to 10,000	2.0 mv/m
10,000 and up	Values given in paragraph (f) of this section

These values are subject to wide variations in individual areas and especial attention must be given to interference from other stations. The values are not considered satisfactory in any case for service to the city in which the main studio of the station is located. The values in paragraph (f) of this section shall apply except as individual consideration may determine.

(h) All classes of broadcast stations have primary service areas subject to limitation by fading and noise, and interference from other stations to the contours set out for each class of station.

(i) Secondary service is delivered in the areas where the sky wave for 50 percent or more of the time has a field intensity of 500 uv/m or greater. (The secondary service area of a Class 1-A station should be considered as having this limit only for determination of service in comparison with other stations.) It is not considered that satisfactory secondary service can be rendered to cities unless the sky wave approaches in value the ground wave required for primary service. The secondary service is necessarily subject to some interference and extensive fading whereas the primary service area of a station is subject to no objectionable interference or fading. Class I stations only are assigned on the basis of rendering secondary service.

NOTE: Standards have not been established for objectionable fading as such standards would necessarily depend on the receiver characteristics which have been changed considerably in this regard during the last several years. Selective fading causing audio distortion and the signal fading below the noise level are the objectionable characteristics of fading on modern design receivers. The AVC circuits in the better designed modern receivers in general maintain the audio output sufficiently constant to be satisfactory during most fading.

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[1] See § 73.184 for curves showing distance to various groundwave field intensity contours for different frequency and ground conductivities and § 73.183.

(j) The intermittent service is rendered by the groundwave and begins at the outer boundary of the primary service area and extends to the value of signal where it may be considered as having no further service value. This may be down to only a few microvolts in certain areas and up to several millivolts in other areas of high noise level, interference from other stations, or objectionable fading at night. The intermittent service area may vary widely from day to night and generally varies from time to time as the name implies. Only Class I stations are assigned for protection from interference from other stations into the intermittent service area.

(k) Section 73.23 provides that the several classes of broadcast stations may be licensed to operate unlimited time, limited time, daytime, sharing time, and specified hours, with full explanation given in the section (see § 73.38 for restriction on limited time authorizations on or after November 30, 1959).

(l) Section 73.24 sets out the general requirements for obtaining an increase in facilities of a licensed station and for a new station. Sections 73.24(b) and 73.37 concern the matter of interference that may be caused by a new assignment or increase in facilities of an existing assignment.

(m) [Reserved]

(n) [Reserved]

(o) Objectionable nighttime interference from another broadcast station is the degree of interference produced when, at a specified field intensity contour with respect to the desired station, the field intensity of an undesired station (or the root-sum-square value of field intensities of two or more stations on the same frequency) exceeds for 10 percent or more of the time the values set forth in these standards. (The secondary service area of a Class I–A station should be considered as having this limit only for determination of service in comparison with other stations.)

(1) With respect to the root-sum-square values of interfering field intensities referred to in this section, except in the case of Class IV stations on local channels, calculation is accomplished by considering the signals in order of decreasing magnitude, adding the squares of the values and extracting the square root of the sum, excluding those signals which are less than 50% of the RSS value of the higher signals already included.

(2) The RSS value will not be considered to be increased when a new interfering signal is added which is less than 50% of the RSS value of the interference from existing stations, and which at the same time is not greater than the smallest signal included in the RSS value of interference from existing stations.

(3) It is recognized that application of the above "50% exclusion" method of calculating the RSS interference may result in some cases in anomalies wherein the addition of a new interfering signal or the increase in value of an existing interfering signal will cause the exclusion of a previously included signal and may cause a decrease in the calculated RSS value of interference. In order to provide the Commission with more realistic information regarding gains and losses in service (as a basis for determination of the relative merits of a proposed operation) the following alternate method for calculating the proposed RSS values of interference will be employed wherever applicable.

(4) In the cases where it is proposed to add a new interfering signal which is not less than 50% of the RSS value of interference from existing stations or which is greater than the smallest signal already included to obtain this RSS value, the RSS limitation after addition of the new signal shall be calculated without excluding any signal previously included. Similarly, in cases where it is proposed to increase the value of one of the existing interfering signals which has been included in the RSS value, the RSS limitation after the increase shall be calculated without excluding the interference from any source previously included.

(5) If the new or increased signal proposed in such cases is ultimately authorized, the RSS values of interference to other stations affected will thereafter be calculated by the "50% exclusion" method without regard to this alternate method of calculation.

(6) Examples of RSS interference calculations:

(i) Existing interferences:

Station No. 1—1.0 mv/m.
Station No. 2—0.60 mv/m.
Station No. 3—0.59 mv/m.
Station No. 4—0.58 mv/m.

The RSS value from Nos. 1, 2 and 3 is 1.31 mv/m: therefore interference from No. 4 is excluded for it is less than 50% of 1.31 mv/m.

(ii) Station A receives interference from:

Station No. 1—1.0 mv/m.
Station No. 2—0.60 mv/m.
Station No. 3—0.59 mv/m.

It is proposed to add a new limitation—0.68 mv/m. This is more than 50% of 1.31 mv/m, the RSS value of Nos. 1, 2 and 3. The RSS value of Station No. 1 and of the proposed station would be 1.21 mv/m which is more than twice as large as the limitation from Station No. 2 or No. 3. However, under the above provision the new signal and the three existing interferences are nevertheless calculated for purposes of comparative studies, resulting in an RSS value of 1.47 mv/m. However, if the proposed station is ultimately authorized, only No. 1 and the new signal are included in all subsequent calculations for the reason that Nos. 2 and 3 are less than 50% of 1.21 my/m, the RSS value of the new signal and No. 1.

(iii) Station A receives interference from:

Station No. 1—1.0 mv/m.
Station No. 2—0.60 mv/m
Station No. 3—0.59 mv/m

No. 1 proposes to increase the limitation it imposes on Station A to 1.21 mv/m. Although the limitations from stations Nos. 2 and 3 are less than 50% of the 1.21 mv/m limitation, under the above provision they are nevertheless included for comparative studies, and the RSS limitation is calculated to be 1.47 mv/m. However, if the increase proposed by Station No. 1 is authorized, the RSS value then calculated is 1.21 mv/m because Stations Nos. 2 and 3 are excluded in view of the fact that the limitations they impose are less than 50% of 1.21 mv/m.

(p) Objectionable interference from a station on the same channel shall be considered to exist to a station when, at the field intensity contour specified in paragraph (v) of this section with respect to the class to which the station belongs, the field intensity of an interfering station (or the root-sum-square value of the field intensities of two or more interfering stations) operating on the same channel, exceeds for ten (10) percent or more of the time the value of the permissible interfering signal set forth opposite such class in paragraph (v) of this section.

(q) Objectionable interference from a station on an adjacent channel shall be considered to exist to a station when, at the normally protected contour of a desired station, the field intensity of the ground wave of an undesired station operating on an adjacent channel (or the root-sum-square value of the field intensities of two or more such undesired stations operating on the same adjacent channel) exceeds a value specified in paragraph (w) of this section.

(r) For the purpose of estimating the coverage and the interfering effects of stations in the absence of field intensity measurements, use shall be made of Figure 8 of § 73.190 which describes the estimated effective field for one kilowatt power input of simple vertical omnidirectional antennas of various heights with ground systems of at least 120 one-quarter wavelength radials. Certain approximations, based on the curve or other appropriate theory, may be made when other than such antennas and ground systems are employed, but in any event the effective field to be employed shall not be less than given in the following:

Class of station:	*Effective field*
I	225 mv/m
II and III	175 mv/m
IV	150 mv/m

In case a directional antenna is employed, the interfering signal of a broadcasting station will vary in different directions, being greater than the above values in certain directions and less in others, depending upon the design and adjustment of the directional antenna system. To determine the interference in any direction the measured or calculated radiated field (unabsorbed field intensity at 1 mile from the array) must be used in conjunction with the appropriate propagation curves. (See § 73.185 for further discussion and solution of a typical directional antenna case.)

(s) The existence or absence of objectionable groundwave interference from stations on the same or adjacent channels shall be determined by actual measurements made according to the method described in § 73.186, or, in the absence of such measurements, by reference to the propagation curves of § 73.184. The existence or absence of objectionable interference due to skywave propagation shall be determined by reference to the appropriate propagation curves in Figure 1a or Figure 2 of § 73.190.

NOTE: In the case of applications tendered on or before September 29, 1965, for new or changed facilities on the clear channels listed in § 73.25(b), Figure 1 of § 73.190 shall be used instead of Figure 1a.

(t) In computing the fifty percent and ten percent skywave field intensity values of a station on a I-A or I-B clear channel, use shall be made of the appropriate curve set forth in Figure 1a of § 73.190, entitled "Skywave Signals for 10 percent and 50 percent of the time." In computing the 10 percent skywave field intensity values of a station on any other channel, use shall be made of the appropriate curve set forth in Figure 2 of § 73.190, entitled "10 percent Skywave Signal Range." (In the case of Class IV stations on local channels, simplifying assumptions may be made. See note to paragraph (a)(4) of this section.) The pertinent vertical angle shall be determined by use of Figure 6a of § 73.190, entitled "Angles of Departure vs. Transmission Range", for stations on all channels.

Note: In the case of applications tendered on or before September 29, 1965, for new or changed facilities on the clear channels listed in § 73.25(b), Figure 1 of § 73.190, entitled "Average Skywave Field Intensity," shall be used instead of Figure 1a, and Figure 6 of § 73.190, entitled "Variation with Distance of Two Important Parameters in the Theory of Skywave Propagation," shall be used instead of Figure 6a.

(u) The distance to any specified groundwave field intensity contour for any frequency may be determined from the appropriate curves in § 73.184 entitled "Ground Wave Field Intensity vs. Distance."

(v) Protected service contours and permissible interference signals for broadcast stations are as follows (for Class I and Class II-A stations, see paragraph (a) of this section):

Class of station	Class of channel used	Permissible power	Signal intensity contour of area protected from objectionable interference.[1]		Permissible interfering signal on same channel [2]	
			Day [3]	Night	Day [3]	Night[4]
I-A	Clear	50 kw	SC 100 uv/m AC 500 uv/m	SC 500 uv/m (50% skywave).[7] A C 500 uv/m [3]	5 uv/m	25 uv/m.[7]
I-B	do	10 kw to 50 kw	SC 100 uv/m AC 500 uv/m	SC 500 uv/m (50% skywave). A C 500 uv/m [3]	5 uv/m	25 uv/m.
II-A	do	0.25 kw to 50 kw (daytime). 10 kw to 50 kw (nighttime).	500 uv/m	500 uv/m [3]	25 uv/m	Do.
II-B and II-D.	do	0.25 kw to 50 kw	500 uv/m	2500 uv/m [3] [5]	do	125 uv/m.
III-A	Regional	1 kw to 5 kw	do	2500 uv/m [3]	do	Do.
III-B	do	0.5 to 1 kw (night), and 5 kw (day).	do	4000 uv/m [3]	do	200 uv/m.
IV	Local	0.25 kw (night), and 0.25 to 1 kw (day).	do	Not prescribed [6]	do	Not prescribed.

[1] When a station is already limited by interference from other stations to a contour of higher value than that normally protected for its class, this contour shall be the established standard for such station with respect to interference from all other stations.

[2] For adjacent channel, see paragraph (w) of this section.

[3] Groundwave.

[4] Skywave field intensity for 10 percent or more of the time.

[5] These values are with respect to interference from all stations except Class I-B, which stations may cause interference to a field intensity contour of higher value. However, it is recommended that Class II stations be so located that the interference received from Class I-B stations will not exceed these values. If the Class II stations are limited by Class I-B stations to higher values, then such values shall be the established standard with respect to protection from all other stations.

[6] See paragraph (a)(4) of this section.

[7] Class I-A stations on channels reserved or the exclusive use of one station during nighttime hours are protected from co-channel interference on that basis. On the frequency 770 kc/s. two Class I stations may be assigned.

SC=Same channel. AC=Adjacent channel.

(w) The following table is to be used for determining the minimum ratio of the field intensity of a desired to an undesired signal for interference free service. In the case of a desired groundwave signal interfered with by two or more skywave signals on the same frequency, the RSS value of the latter is used. From the table, it is apparent that in many cases stations operating on channels 10 and 20 kilocycles apart may be operated with antenna systems side by side or otherwise in proximity without any indications of interference if the interference is defined only in terms of permissible ratios listed in this paragraph. As a practical matter, serious interference problems may arise when two or more stations with the same general service area are operated on channels 10, 20, and 30 kilocycles apart.

Frequency separation of desired to undesired signals—	Desired groundwave to—		Desired 50 percent skywave to undesired 10 percent skywave
	Undesired groundwave	Undesired 10 percent skywave	
0 kc/s	20:1	20:1	20:1
10 kc/s	1:1	1:5	(1)

[1] The secondary service area of a Class I station is not protected from adjacent channel interference. However, if it is desired to make a determination of the area in which adjacent channel groundwave interference (10 kc/s removed) to skywave service exists, it may be considered as the area where the ratio of the desired 50 percent skywave of the Class I station to the undesired groundwave of a station 10 kc/s removed is 1 to 4.

(x) Two stations, one with a frequency twice that of the other, should not be assigned in the same groundwave service area unless special precautions are taken to avoid interference from the second harmonic of the lower frequency. In selecting a frequency, consideration should be given to the fact that occasionally the frequency assignment of two stations in the same area may bear such a relation to the intermediate frequency of some broadcast receivers as to cause so-called "image" interference. However, since this can usually be rectified by readjustment of the intermediate frequency of such receivers, the Commission in general will not take this kind of interference into consideration in allocation problems.

(y) Two stations operating with synchronized carriers and carrying the identical program will have their groundwave service subject to some distortion in areas where the signals from the two stations are of comparable intensity. For the purpose of estimating coverage of such stations areas in which the signal ratio is between 1 to 2 and 2 to 1 will not be considered as having satisfactory service.

Note: Two stations are considered to be operated synchronously when the carriers are maintained within one-fifth of a cycle per second of each other and they transmit identical programs.

[28 F.R. 13574, Dec. 14, 1963, as amended at 29 F.R. 9500, July 11, 1964; 30 F.R. 13783, Oct. 29, 1965; 31 F.R. 8068, June 8, 1966; 33 F.R. 15419, Oct. 17, 1968]

§ 73.183 Groundwave signals.

(a) Interference that may be caused by a proposed assignment or an existing assignment during daytime should be determined, when possible, by measurements on the frequency involved or on another frequency over the same terrain and by means of the curves in § 73.184 entitled "Ground Wave Field Intensity versus Distance."

(b) In determining interference based upon field intensity measurements, it is necessary to do the following: First, establish the outer boundary of the protected service area of the desired station in the direction of the station that may cause interference to it. Second, at this boundary, measure the interfering signal from the undesired station. The ratio of the desired to the undesired signal given in § 73.182(w) should be applied to the measured signals and if the required ratio is observed, no objectionable interference is foreseen. When measurements of both the desired and undesired stations are made in one area to determine the point where objectionable interference from groundwave signals occur or to establish other pertinent contours, several measurements of each station shall be made within a few miles of this point or contour. The effective field of the antennas in the pertinent directions of the stations must be established and all measurements must be made in accordance with § 73.186.

Note: International agreement in the matter of standards for good engineering practice concerning determination of ground conductivity by field intensity measurements has not been arrived at as contemplated by NARBA, and the United States has no established procedures for reciprocal consideration of such measurements with any country except Canada. Therefore, groundwave field intensity measurements will not be accepted or considered for the purpose of establishing that interference to a station in a foreign country other than Canada, or that signal intensity at the border thereof, would be less than indicated by the application of the ground conductivity maps and engineering standards contained in this part and applicable international agreements. Satisfactory groundwave measurements offered for the purpose of demonstrating values of conductivity other than those shown by Figure M3 in problems involving protection of Canadian stations or the Canadian border will be considered only if, after review thereof, the appropriate agency of the Canadian government notifies the Commission that they are acceptable for such purpose.

(c) In all cases where measurements taken in accordance with the requirements are not available, the groundwave intensity must be determined by means of the pertinent map of ground conductivity and the groundwave curves of field intensity versus distance. The conductivity of a given terrain may be determined by measurements of any broadcast signal traversing the terrain involved. Figure M3 (see Note 1) shows the conductivity throughout the United States by general areas of reasonably uniform conductivity. When it is clear that only one conductivity value is involved, Figure R3 of § 73.190, which is a replica of Figure M3 and contained in these standards, may be used; in all other situations Figure M3 must be employed. It is recognized that in areas of limited size or over a particular path, the conductivity may vary widely from the values given; therefore, these maps are to be used only when accurate and acceptable measurements have not been made. (For determinations of interference and service requiring a knowledge of ground conductivities in Mexico, Appendix H to the North American Regional Broadcasting Agreement, Washington, D.C., 1950, may be used. Similarly, for values of ground conductivities in Canada, a map issued by the Telecommunications and Electronics Branch, Department of Transport, Ottawa, Ontario, entitled "Provisional Ground Conductivity Map" and dated June 1, 1960, may be used. Where different conductivities appear in the maps of two countries on opposite sides of the border, such differences are to be considered as real, even if they are not explained by geophysical cleavages. A uniform ground conductivity of 10 millimhos per meter may be assumed for Cuba.)

NOTE 1: Figure R3 in § 73.109 is a replica of Figure M3. Figure M3, which is incorporated in these Standards by reference, was derived by indicating ground conductivity values in the United States on the United States Albers equal area projection map based on standard parallels 29½° and 45½°; North American datum; scale 1/2,500,000). Figure M3, consisting of two sections, an eastern and a western half, may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.

NOTE 2: Copies of "Provisional Ground Conductivity Map" may be obtained by addressing the Director, Telecommunications and Electronics Branch, Department of Transport, Ottawa, Ontario, Canada. Single copies are priced at $5.00 (one copy consists of two sheets). Remittance should be made by check or money order payable to the Receiver General of Canada.

(d) Example of determining interference by the graphs in § 73.184:

It is desired to find whether objectionable interference exists between a 5 kw Class III station on 990 kc/s and a 1 kw Class III station on 1000 kc/s, the stations being separated by 130 miles; both stations use nondirectional antennas having such height as to produce an effective field of 1 kw of 175 mv/m. (See § 73.185 in case of use of directional antennas.) The conductivity at each station and of the intervening terrain is determined as 6 mmhos/m. The protection to Class III stations during daytime is to the 500 uv/m contour. The distance to the 500 uv/m groundwave contour of the 1 kw station is determined by the use of the appropriate curve in § 73.184, Graph 12. Since the curve is plotted for 100 mv/m at a mile, to find the distance to the 500 uv/m contour of the 1 kw station, it is necessary to determine the distance to the 285 uv/m contour $\frac{100 \times 500}{175}=285$). From the appropriate curve, the estimated radius of the service area for the desired station is found to be 39.5 miles. Subtracting this distance from the distance between the two stations leaves 90.5 miles for the interfering signal to travel. From the above curve it is found that the signal from the 5 kw station at this distance would be 158 uv/m. Since a one to one ratio applies for stations separated by 10 kc/s, the undesired signal at that point can have a value up to 500 uv/m without objectionable interference. If the undesired signal had been found to be greater than 500 uv/m, then objectionable interference would exist. For other channel separations, the appropriate ratio of desired to undesired signal should be used.

(e) Where a signal traverses a path over which different conductivities exist, the distance to a particular groundwave field intensity contour shall be determined by the use of the equivalent distance method. Reasonably accurate results may be expected in determining field intensities at a distance from the antenna by application of the equivalent distance method when the unattenuated field of the antenna, the various ground conductivities and the location of discontinuities are known. This method considers a wave to be propagated across a given conductivity according to the curve for a homogeneous earth of that conductivity. When the wave crosses from a region of one conductivity into a region of a second conductivity, the equivalent distance of the receiving point from the transmitter changes abruptly but the field intensity does not. From a point just inside the second region the transmitter appears to be at that distance where, on the curve for a homogeneous earth of the second conductivity, the field intensity equals the value that occurred just across the boundary in the first region. Thus the equivalent distance from the receiving point to the transmitter may be either greater or less than the actual distance. An imaginary transmitter is considered to exist at that equivalent distance. This technique is not intended to be used as a means of evaluating unattenuated field or ground conductivity by the analysis of measured data. The method to be employed for such determinations is set out in § 73.186.

(f) An example of the use of the equivalent distance method follows:

It is desired to determine the distance to the 0.5 mv/m and 0.025 mv/m contours of a station on a frequency of 1000 kc/s with an inverse distance field of 100 mv/m at one mile being radiated over a path having a conductivity of 10 mmhos/m for a distance of 15 miles, 5 mmhos/m for the next 20 miles and 15 mmhos/m thereafter. By the use of the appropriate curves in § 73.184, Graph 12, it is seen that at a distance of 15 miles on the curve for 10 mmhos/m the field is 3.45 mv/m. The equivalent distance to this field intensity for a conductivity of 5 mmhos/m is 11 miles. Continuing on the propagation curve for the second conductivity, the 0.5 mv/m contour is encountered at a distance of 27.9 miles from the imaginary transmitter. Since the imaginary transmitter was 4 miles nearer (15−11 miles) to the 0.5 mv/m contour, the distance from the contour to the actual transmitter is 31.9 miles (27.9+4 miles). The distance to the 0.025 mv/m contour is determined by continuing on the propagation curve for the second conductivity to a distance of 31 miles (11+20 miles), at which point the field is read to be 0.39 mv/m. At this point the conductivity changes to 15 mmhos/m and from the curve relating to that conductivity, the equivalent distance is determined to be 58 miles—27 miles more distant than would obtain had a conductivity of 5 mmhos/m prevailed. Using the curve representing the conductivity of 15 mmhos/m the 0.025 mv/m contour is determined to be at an equivalent distance of 172 miles. Since the imaginary transmitter was considered to be 4 miles closer at the first boundary and 27 miles farther at the second boundary, the net effect is to consider the imaginary transmitter 23 miles (27—4 miles) more distant than the actual transmitter; thus the actual distance to the 0.025 mv/m contour is determined to be 149 miles (172—23 miles).

[28 F.R. 13574, Dec. 14, 1963, as amended at 33 F.R. 15420, Oct. 17, 1968]

§ 73.184 Groundwave field intensity charts.

(a) Graphs 1 to 19A show the computed values of groundwave field intensity as a function of the distance from the transmitting antenna. The groundwave field intensity is here considered to be that part of the vertical component of the electric field received on the ground which has not been reflected from the ionosphere nor the troposphere. These 20 charts were computed for 20 different frequencies, a dielectric constant of the ground equal to 15 for land and 80 for sea water (referred to air as unity) and for the ground conductivities (expressed in mmhos/m) given on the curves. The curves show the variation of the groundwave field intensity with distance to be expected for transmission from a short vertical antenna at the surface of a uniformly conducting spherical earth with the ground constants shown on the curves; the curves are for an antenna power and efficiency such that the inverse distance field is 100 mv/m at 1 mile. The curves are valid at distances large compared to the dimensions of the antenna for other than short vertical antennas.

(b) The inverse distance field (100 mv/m divided by the distance in miles) corresponds to the groundwave field intensity to be expected from an antenna with the same radiation efficiency when it is located over a perfectly conducting earth. To determine the value of the groundwave field intensity corresponding to a value of inverse distance field other than 100 mv/m at 1 mile, simply multiply the field intensity as given on these charts by the desired value of inverse distance field at 1 mile divided by 100; for example, to determine the groundwave field intensity for a station with an inverse distance field of 1700 mv/m at 1 mile, simply multiply the values given on the charts by 17. The value of the inverse distance field to be used for a particular antenna depends upon the power input to the antenna, the nature of the ground in the neighborhood of the antenna, and the geometry of the antenna. For methods of calculating the interrelations between these variables and the inverse distance field, see "The Propagation of Radio Waves Over the Surface of the Earth and in the Upper Atmosphere," Part II, by Mr. K. A. Norton, Proc. I. R. E., Vol 25, September 1937, pp. 1203–1236.

(c) At sufficiently short distances (say less than 35 miles), such that the curvature of the earth does not introduce an additional attenuation of the waves, the graphs were computed by means of the plane earth formulas given in the paper, "The Propagation of Radio Waves Over the Surface of the Earth and in the Upper Atmosphere," Part I, by Mr. K. A. Norton, Proc. I. R. E., Vol. 24, October 1936, pp. 1367–1387. At larger distances the additional attenuation of the waves which is introduced by the effect of the curvature of the earth was introduced by the methods outlined in the papers, "The Diffraction of Electromagnetic Waves from an Electrical Point Source round a Finitely Conducting Sphere, with Applications to Radiotelegraphy and the Theory of the Rainbow," by Balth van der Pol and H. Bremmer, Part I, Phil. Mag., Vol. 24, p. 141, July 1937, Part II, Phil. Mag., Vol. 24, p. 82, Suppl., November 1937, "Ergebnisse einer Theorie ueber die Fortpflanzung elektron magnetischer Wellen ueber eine Kugel endlicher Leitfahigkeit," by Balth van der Pol and H. Bremmer, Hochfrequenztechnik und Elektroakustik, Band 51, Heft 6, June 1938, "Further Note on the Propagation of Radio Waves over a Finitely Conducting Spherical Earth," by Balth van der Pol and H. Bremmer, Phil. Mag., Vol. 27, p. 261, March 1939. In order to allow for the refraction of the radio waves in the lower atmosphere due to the variation of the dielectric constant of the air with height above the earth, a radius of the earth equal to 4/3 the actual radius was used in the computations for the effect of the earth's curvature in the manner suggested by C. R. Burrows, "Radio Propagation over Spherical Earth," Proc. I. R. E., May 1935; i. e., the distance corresponding to a given value of attenuation due to the curvature of the earth in the absence of air refraction was multiplied by the factor $(4/3)^{\frac{2}{3}}=1.21$. The amount of this refraction varies from day to day and from season to season, depending on the air mass conditions in the lower atmosphere. If k denotes the ratio between the equivalent radius of the earth and the true radius, the following table gives the values of k for several typical air masses encountered in the United States.

Air mass type	k	
	Summer	Winter
Tropical Gulf—*T*	1.53	1.43
Polar Continental—*P*	1.31	1.25
Superior—*S*	1.25	1.25
Average	1.33	

It is clear from this table that the use of the average value of $k=4/3$ is justified in obtaining a single correction for the systematic effects of atmospheric refraction.

(d) Provided the value of the dielectric constant is near 15, the curves of Graphs 1 to 19A may be compared with experimental data to determine the appropriate values of the ground conductivity and of the inverse distance field intensity at 1 mile. This is accomplished simply by plotting the measured fields on transparent log-log graph paper similar to that used for Graphs 1 to 19A and superimposing this chart over the graph corresponding to the frequency involved. The log-log graph sheet is then shifted vertically until the best fit is obtained with one of the curves on the graph; the intersection of the inverse distance line on the graph with the 1-mile abscissa on the chart determines the inverse distance field intensity at 1 mile. For other values of dielectric constant, the following procedure may be used for a determination of the dielectric constant of the ground, conductivity of the ground and the inverse distance field intensity at 1 mile. Graph 20 gives the relative values of groundwave field intensity over a plane earth as a function of the numerical distance *p* and phase angle *b*. On graph paper with coordinates similar to those of Graph 20, plot the measured values of field intensity as ordinates versus the corresponding distances from the antenna expressed in miles as abscissae. The data should be plotted only for distances greater than one wavelength (or, when this is greater, five times the vertical height of the antenna in the case of a single element, i. e., nondirectional antenna or 10 times the spacing between the elements of a directional antenna) and for distances less than $50/f_{Mc/s}^{1/3}$ miles (i.e., 50 miles at 1 Mc/s). Then, using a light box, place the sheet with the data plotted on it over the sheet with the curves of Graph 20 and shift the data sheet vertically and horizontally (making sure that the vertical lines on both sheets are parallel) until the best fit with the data is obtained with one of the curves on Graph 20. When the two sheets are properly lined up, the value of the field intensity corresponding to the intersection of the inverse distance line of Graph 20 with the 1 mile abscissa on the data sheet is the inverse distance field intensity at 1 mile, and the values of the numerical distance at 1 mile, p_1, and of *b* are also determined. Knowing the values of *b* and p_1 (the numerical distance at 1 mile), we may substitute in the following approximate formulas to determine the appropriate values of the ground conductivity and dielectric constant.

$$x \cong \frac{\pi}{p} \cdot (R/\lambda)_1 . \cos b \qquad (1)$$

$(R/\lambda)_1$ = Number of wavelengths in 1 mile.

$$\sigma_{e.m.u.} = \frac{x f_{mc}}{17.9731} \cdot 10^{-14} \qquad (2)$$

$\sigma_{e.m.u.}$ = Conductivity of the ground expressed in electromagnetic units.

f_{mc} = frequency expressed in megacycles.

$$\epsilon \cong x \tan b - 1 \qquad (3)$$

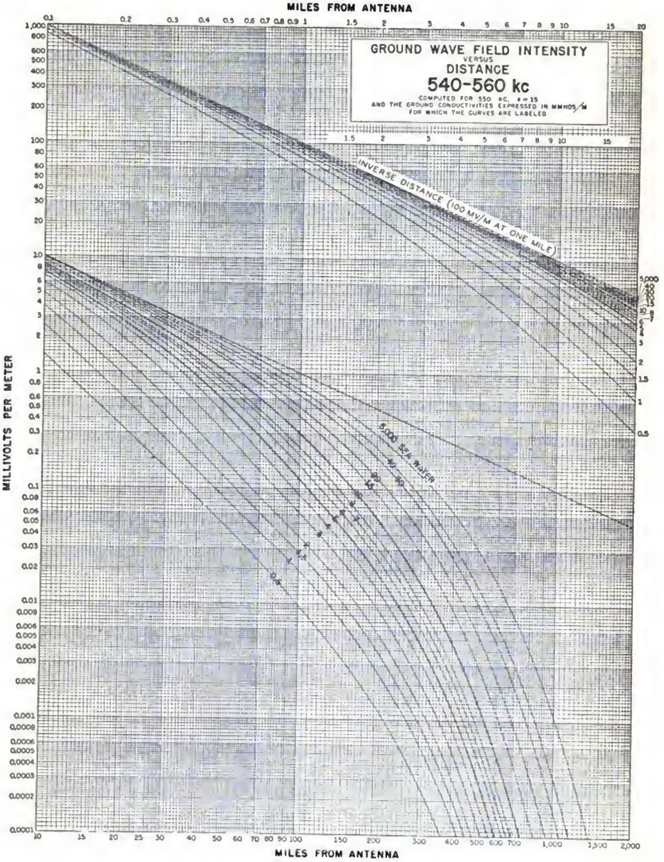
ϵ = dielectric constant of the ground referred to air as unity

First solve for *x* by substituting the known values of p_1, $(R/\lambda)_1$, and cos *b* in equation (1). Equation (2) may then be solved for σ and equation (3) for ϵ). At distances greater than $50/f_{Mc/s}^{1/3}$ miles the curves of Graph 20 do not give the correct relative values of field intensity since the curvature of the earth weakens the field more rapidly than these plane earth curves would indicate. Thus, no attempt should be made to fit experimental data to these curves at the larger distances.

(e) At sufficiently short distances (say less than 35 miles at broadcast frequencies), such that the curvature of the earth does not introduce an additional attenuation of the waves, the curves of Graph 20 may be used for determining the groundwave field intensity of transmitting and receiving antennas at the surface of the earth for any radiated power, frequency, or set of ground constants in the following manner: First, lay off the straight inverse distance line corresponding to the power radiated on transparent log-log graph paper similar to that of Graph 20, labelling the ordinates of the chart in terms of field intensity, and the abscissae in terms of distance. Next, by means of the formulas given on Graph 20, calculate the value of the numerical distance, *p*, at 1 mile, and the value of *b*. Then superimpose the log-log chart over Graph 20, shifting it vertically until the inverse distance lines on both charts coincide and shifting it horizontally until the numerical distance at 1 mile on Graph 20 coincides with 1 mile on the log-log graph paper. The curve of Graph 20 corresponding to the calculated value of *b* is then traced on the log-log graph paper giving the field intensity versus distance in miles.

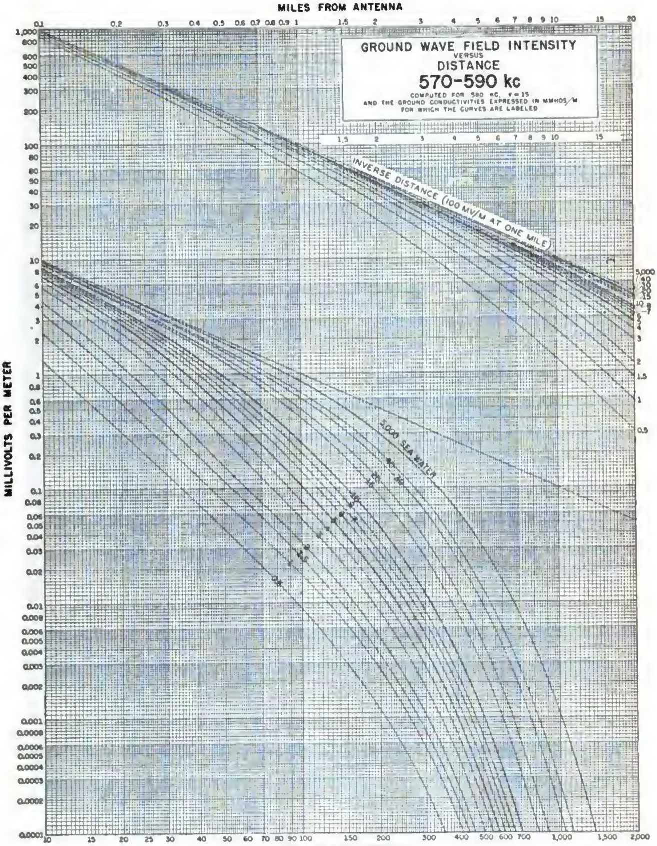
(f) This paragraph consists of the following Graphs 1 to 19, 19A, and 20, and a "slider for use with graphs."

NOTE: The graphs as reproduced herein, due to the small scale, are not to be used in connection with material submitted to the F. C. C. and therefore the slider is not reproduced.



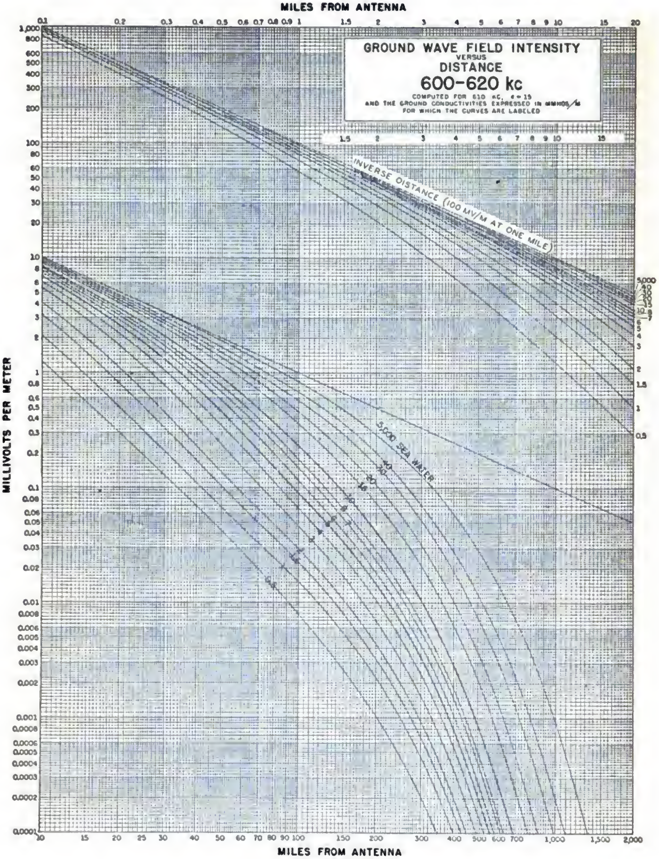
GRAPH 1

FCC-1954



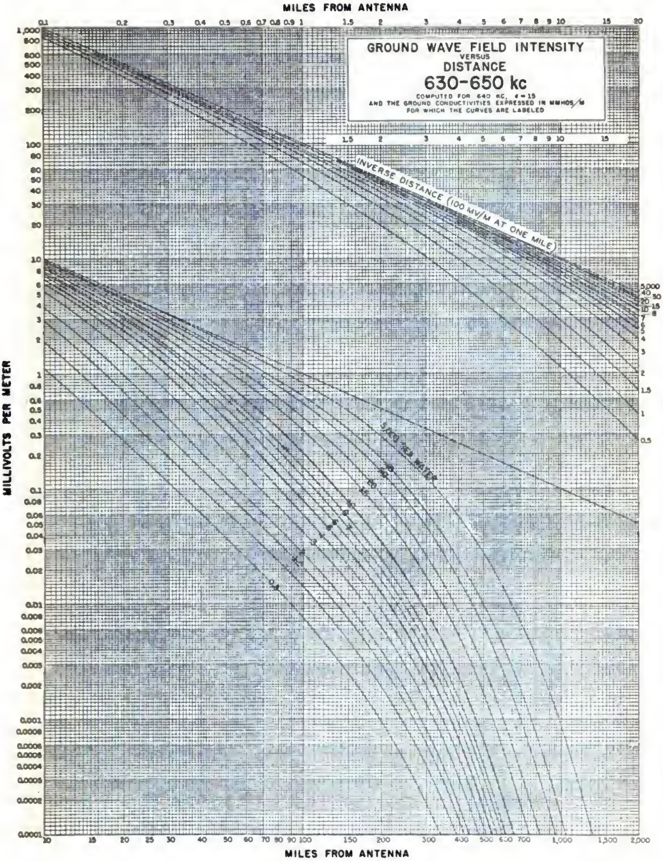
GRAPH 2

FCC-1954



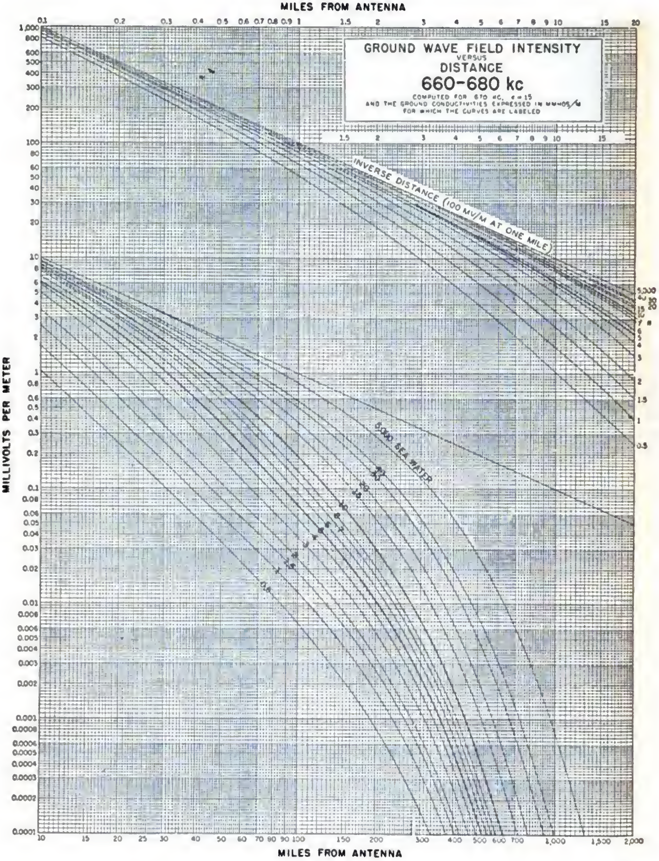
GRAPH 3

FCC-1954



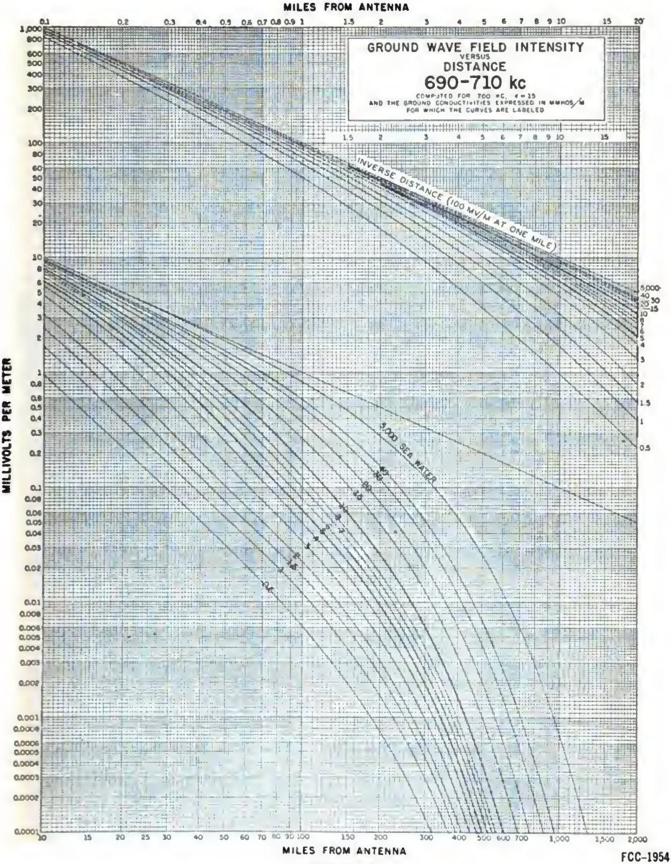
GRAPH 4

FCC-1954



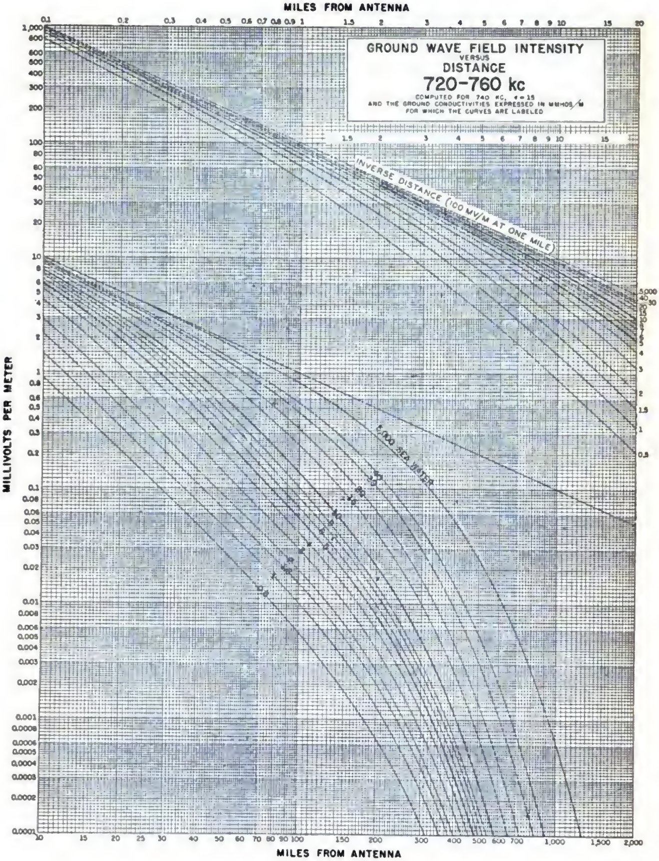
GRAPH 5

FCC-1954



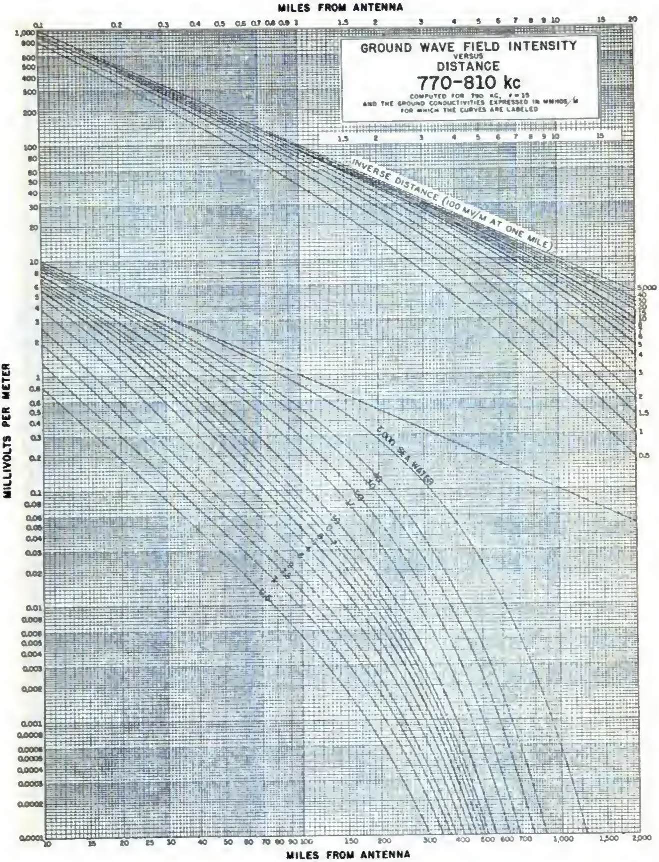
GRAPH 6

FCC-1954



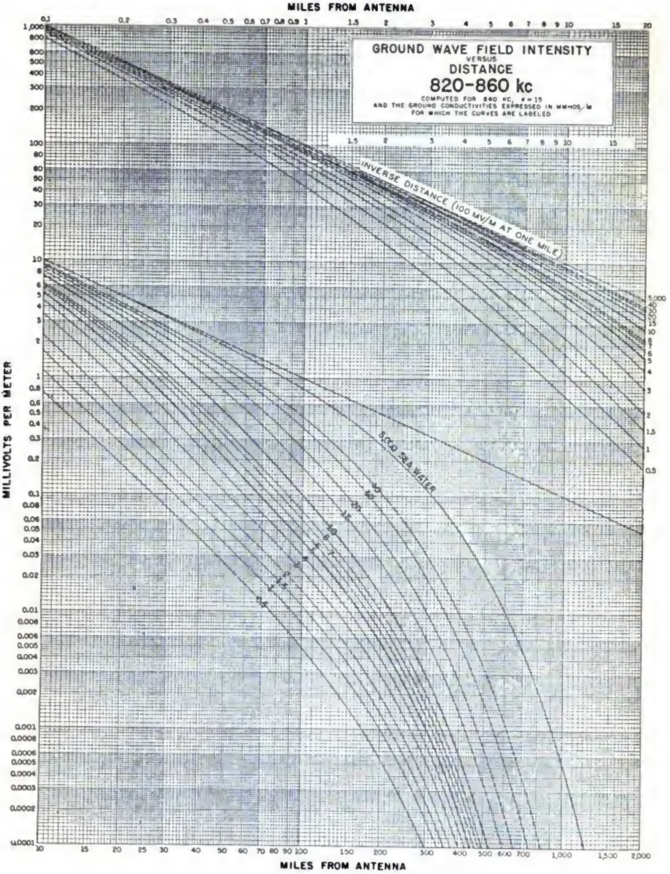
GRAPH 7

FCC-1954



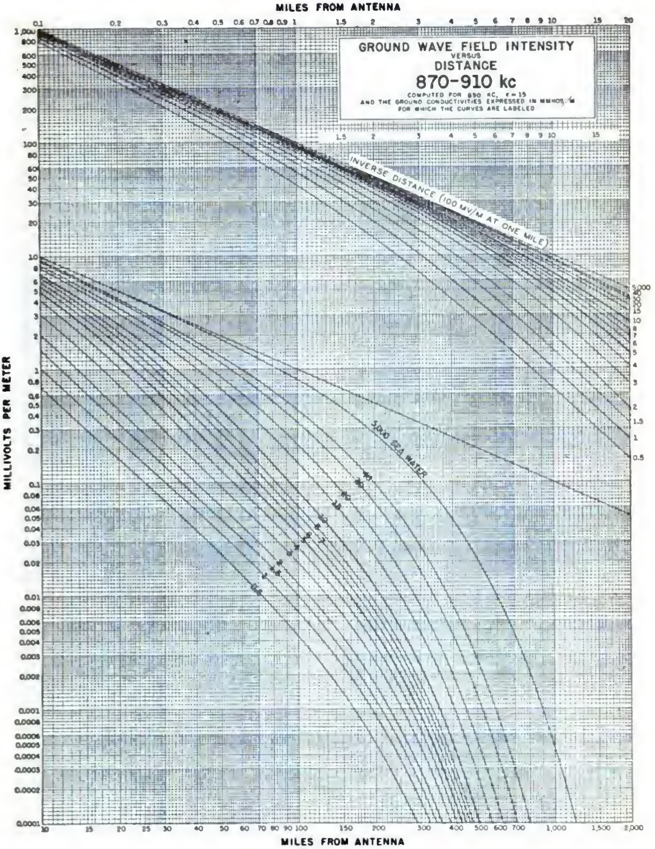
GRAPH 8

FCC-1944



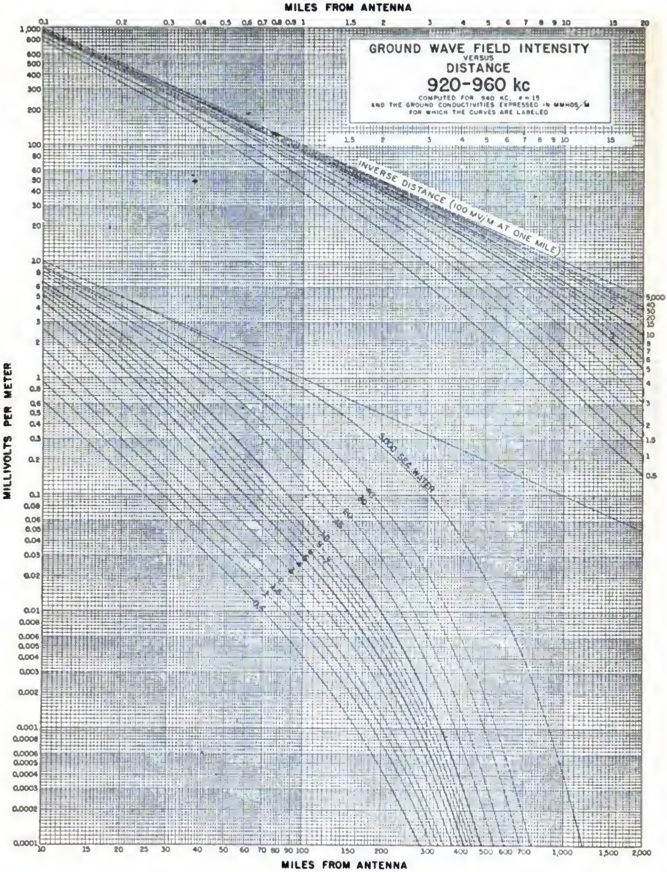
GRAPH 9

FCC-1954



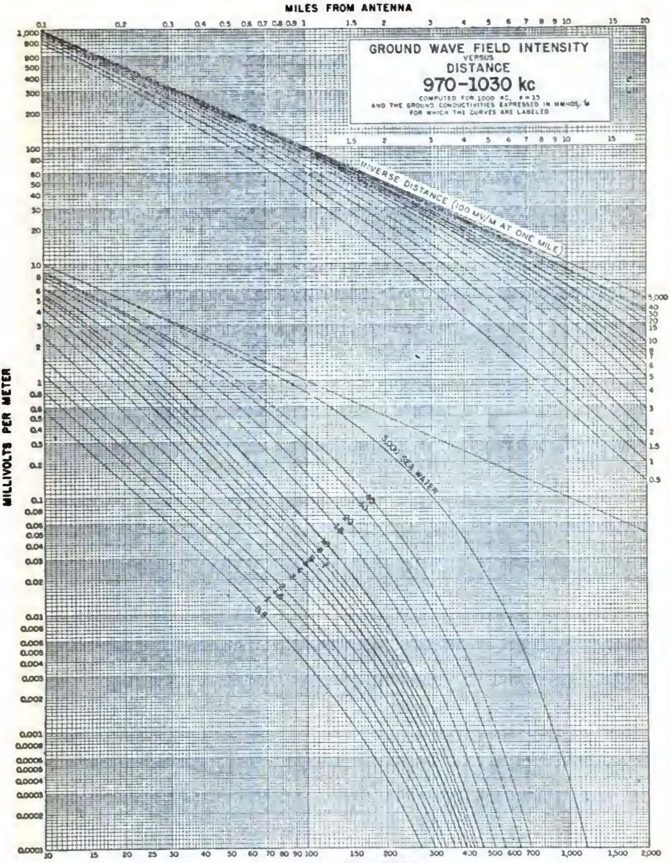
GRAPH 10

FCC-1954



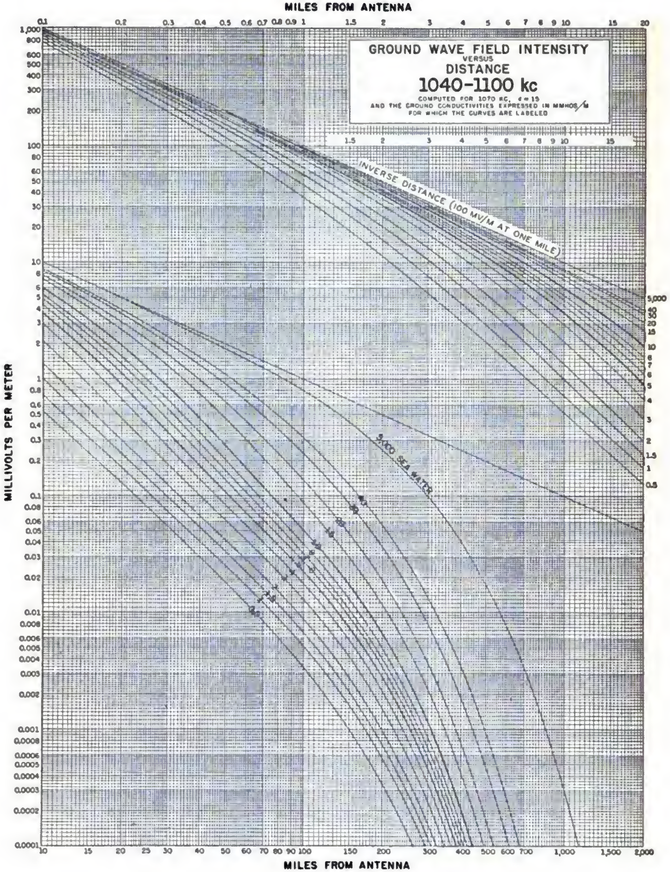
GRAPH 11

FCC-1954



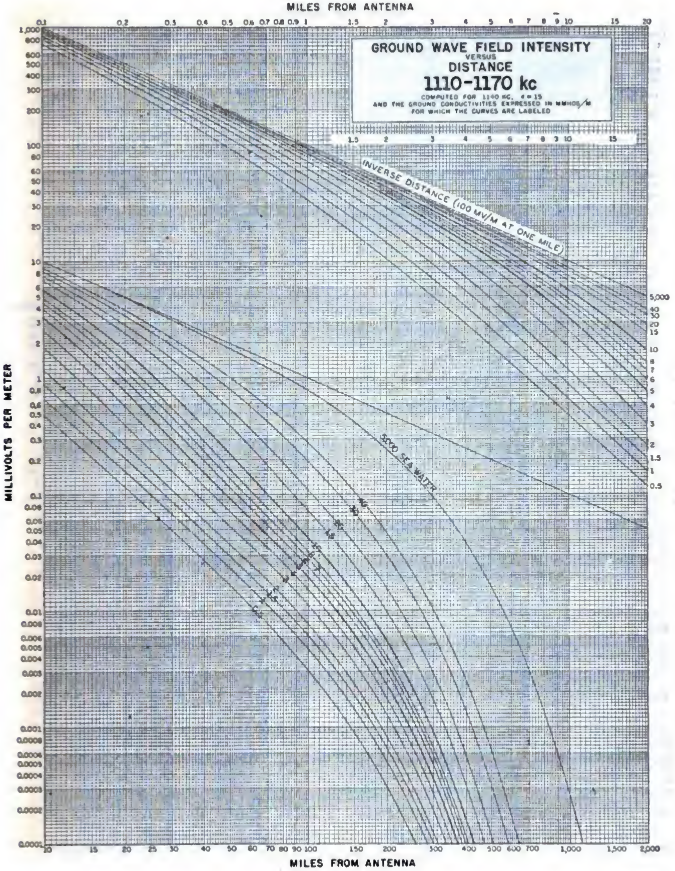
GRAPH 12

FCC-1954



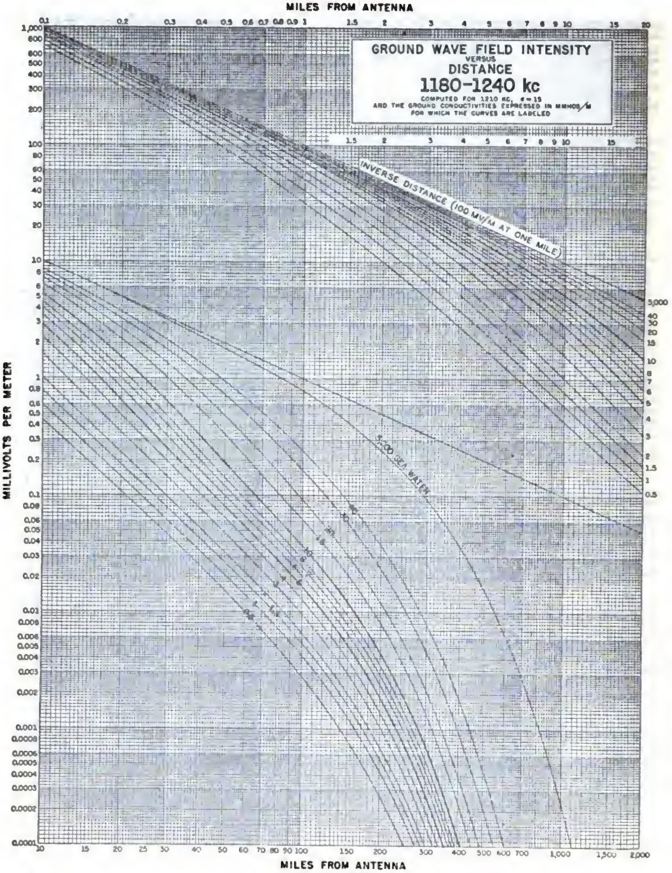
GRAPH 13

FCC–1954



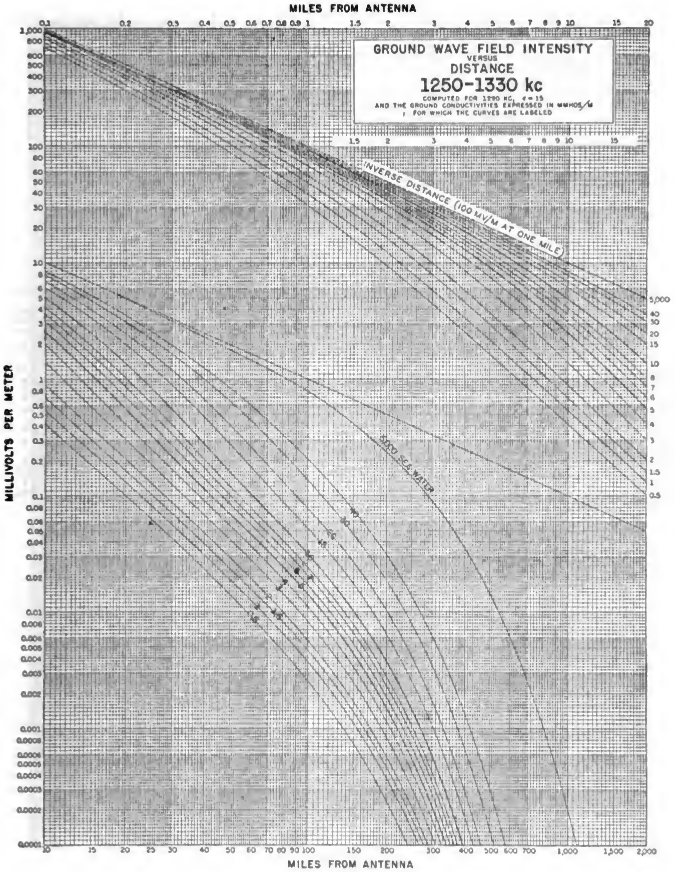
GRAPH 14

FCC-1954



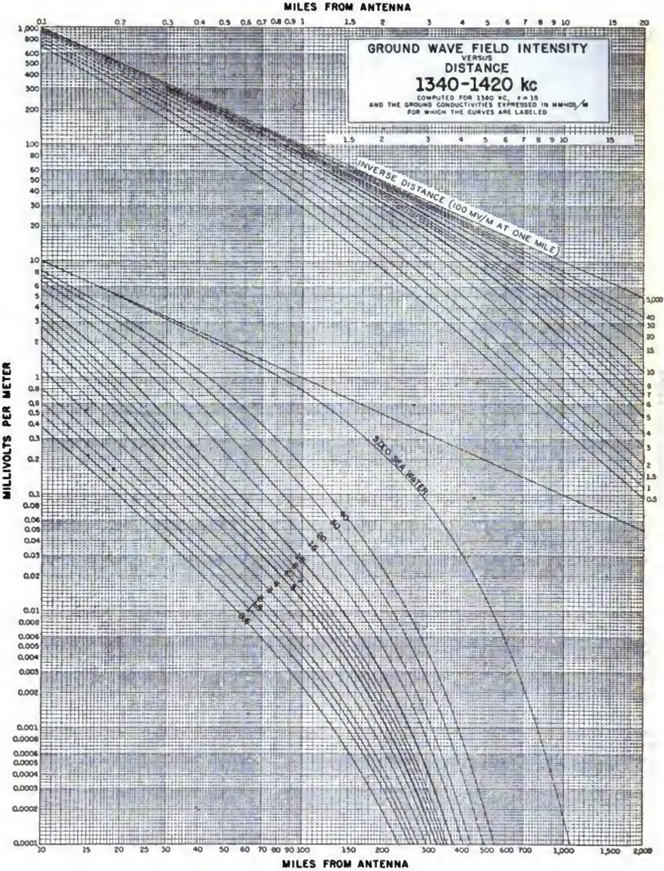
GRAPH 15

FCC-1954



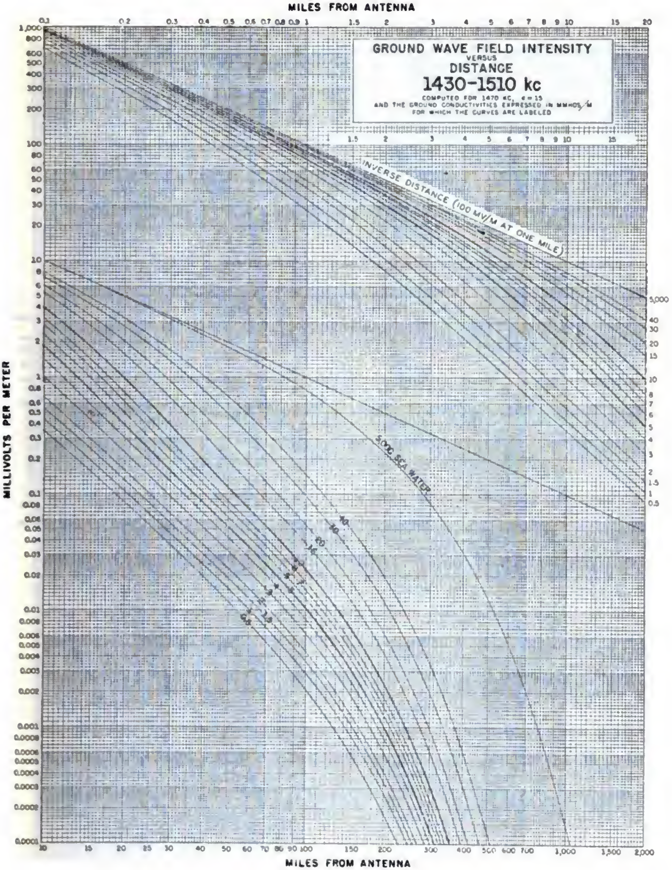
GRAPH 16

FCC-1954



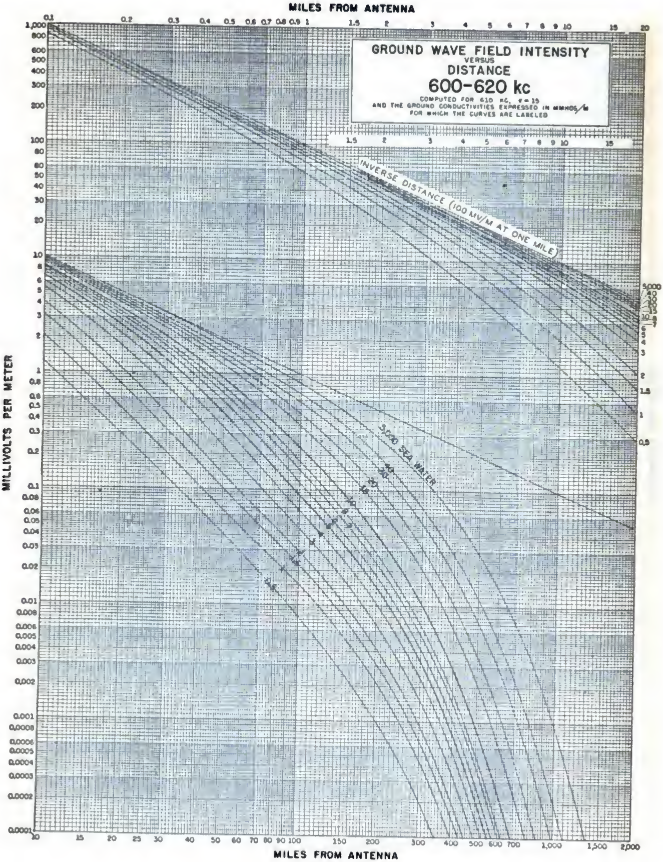
GRAPH 17

FCC-1957



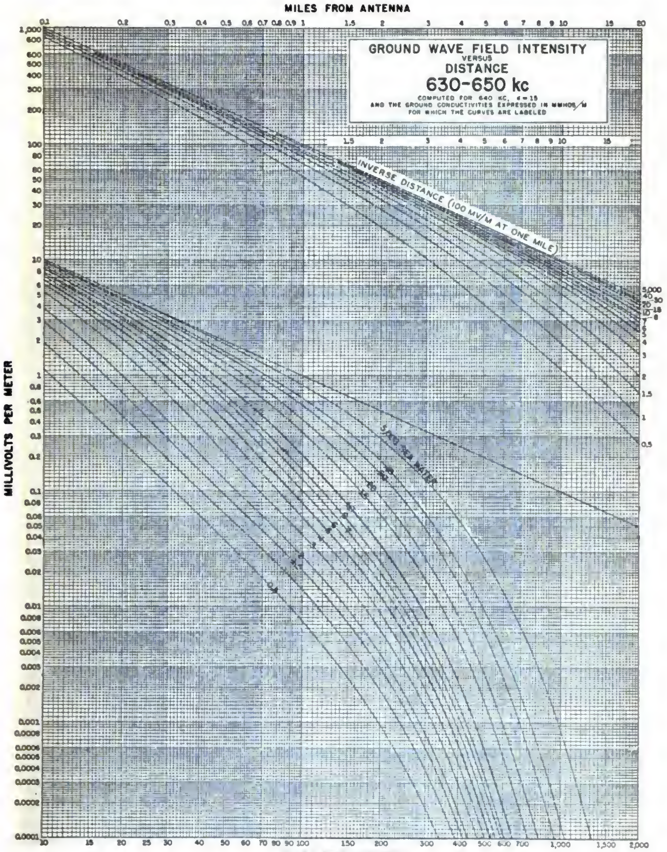
GRAPH 18

FCC-1954



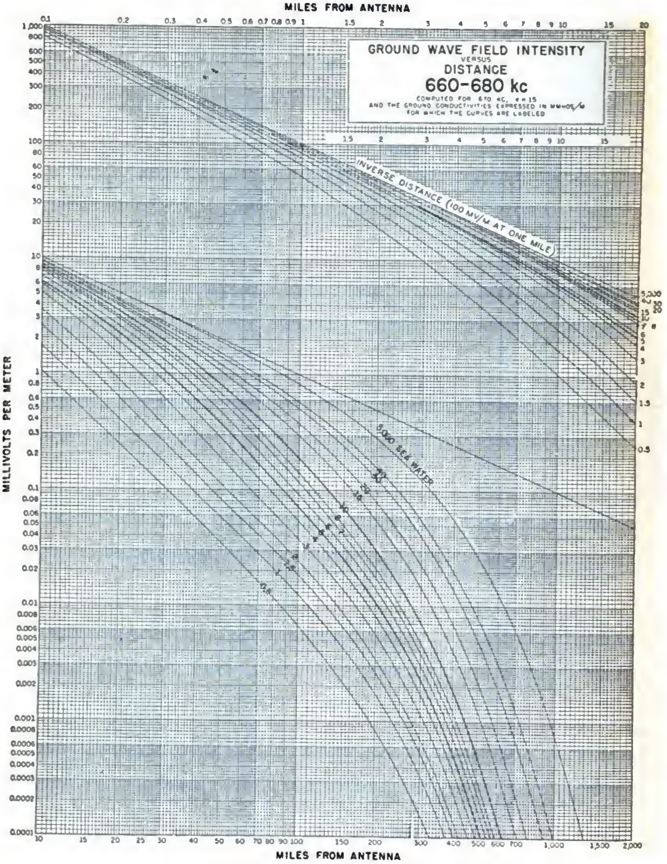
GRAPH 3

FCC-1954



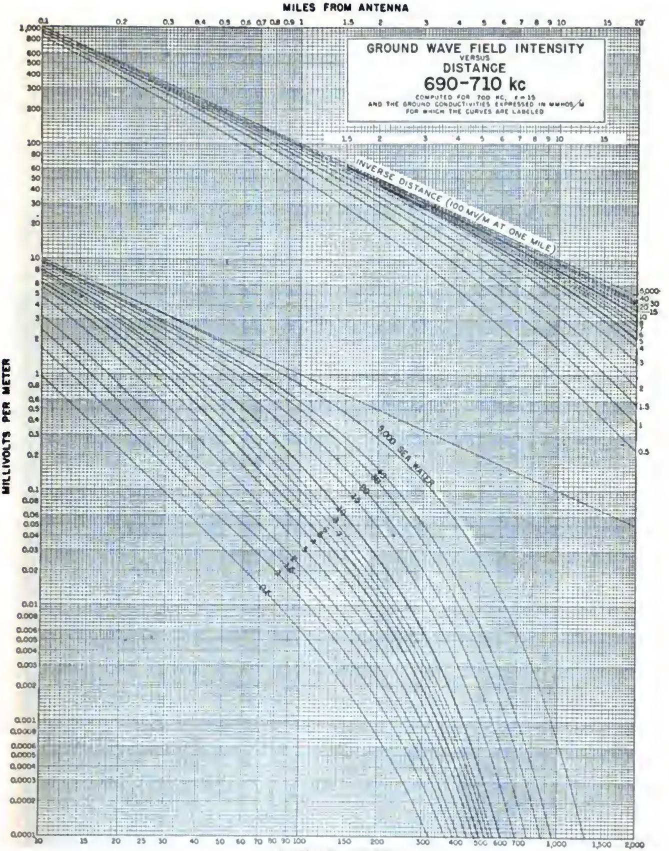
GRAPH 4

FCC-1954



GRAPH 5

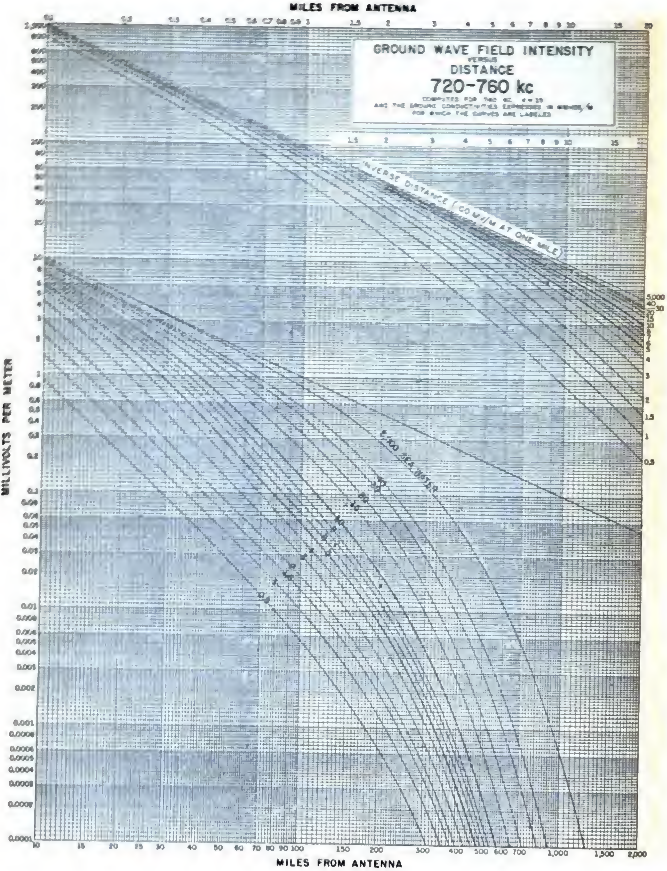
FCC-1954



MILES FROM ANTENNA

GRAPH 6

FCC-1954



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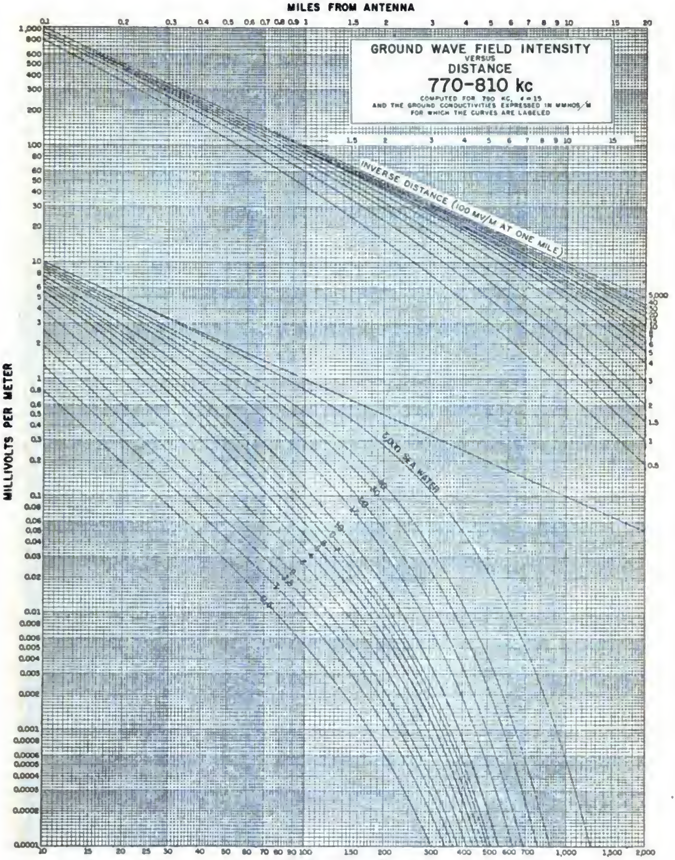
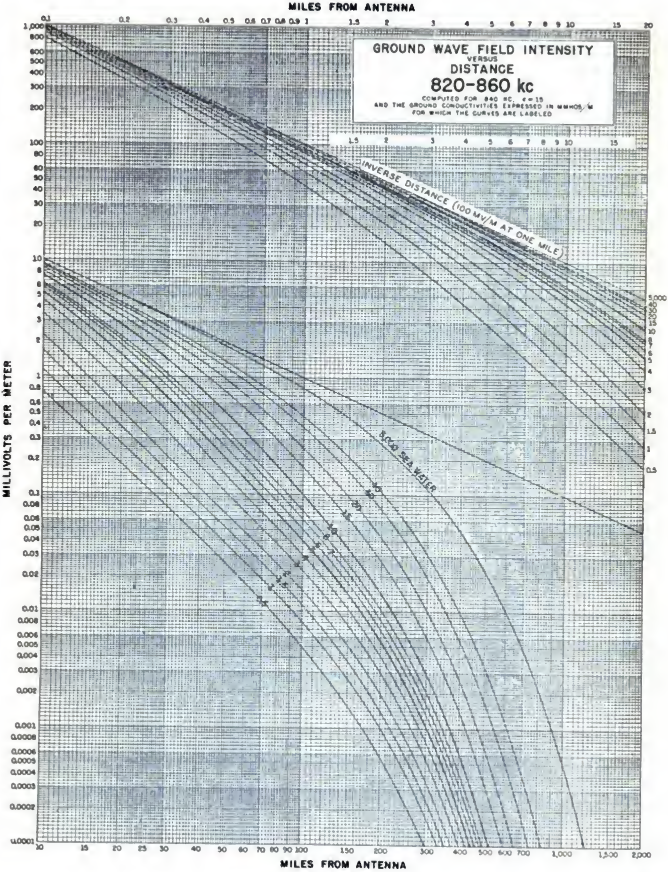
FCC-1954



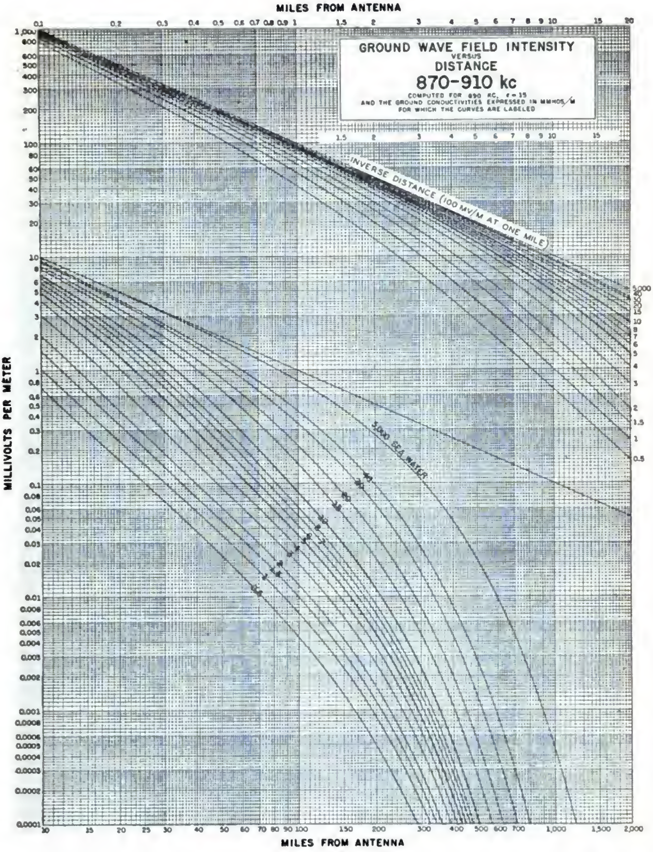
GRAPH 8

FCC-19AA



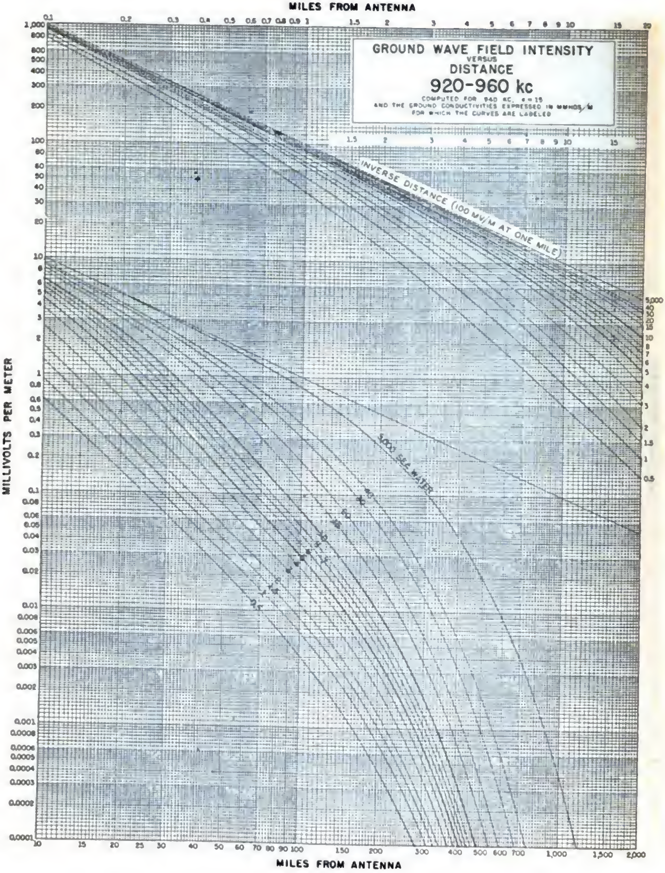
GRAPH 9

FCC-1954



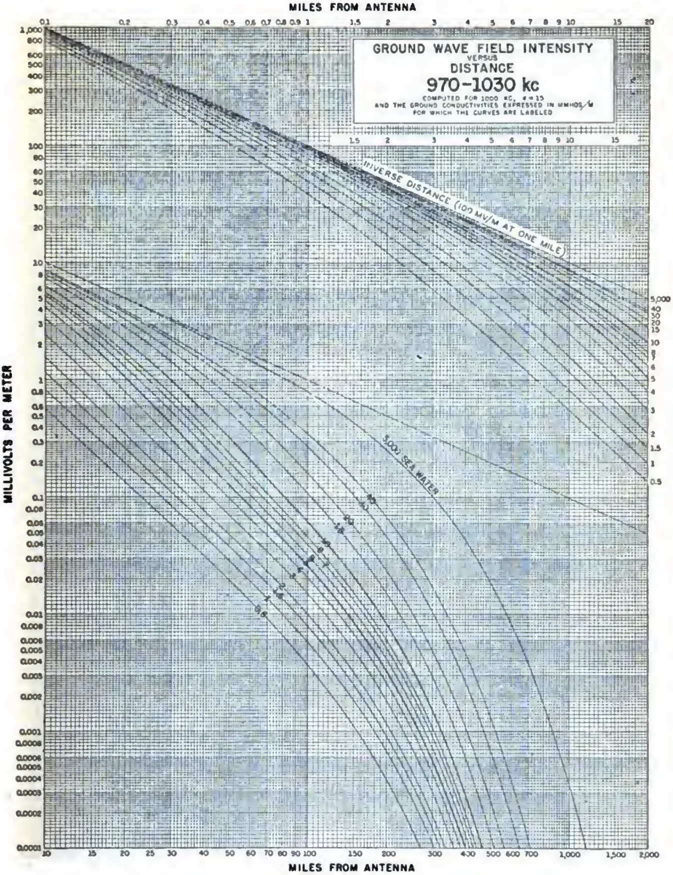
GRAPH 10

FCC-1954



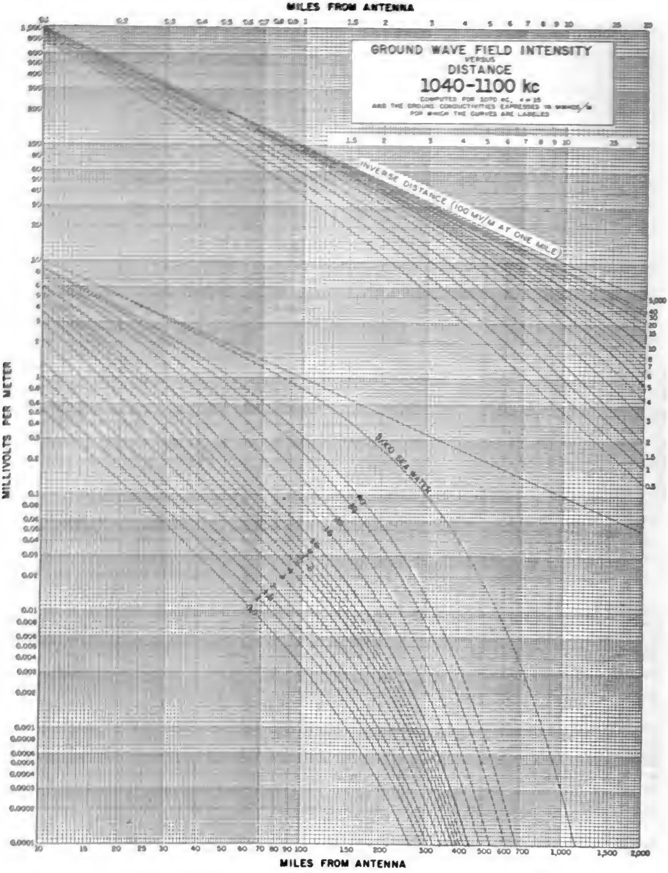
GRAPH 11

FCC-1954



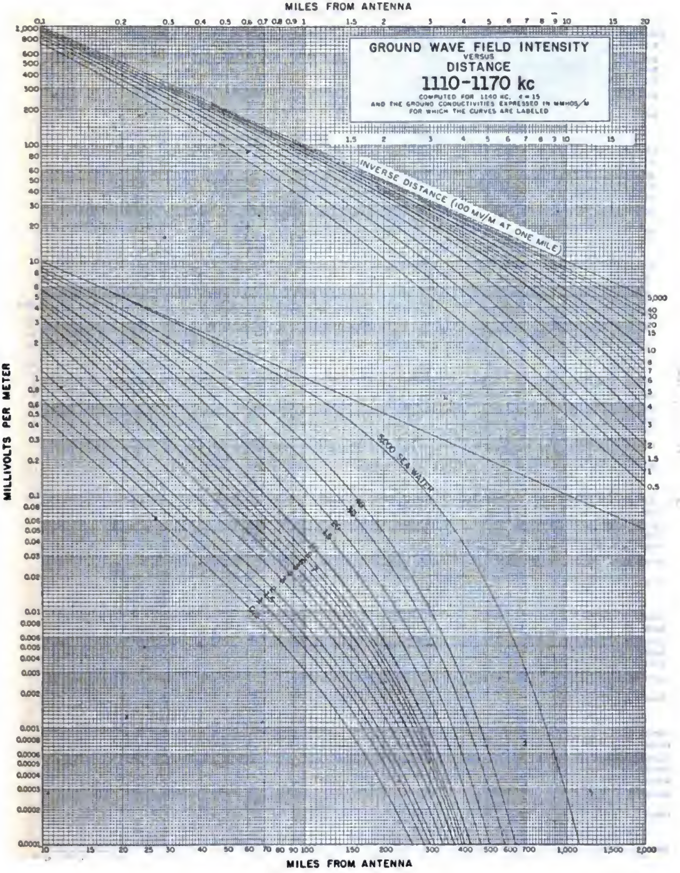
GRAPH 12

FCC-1954



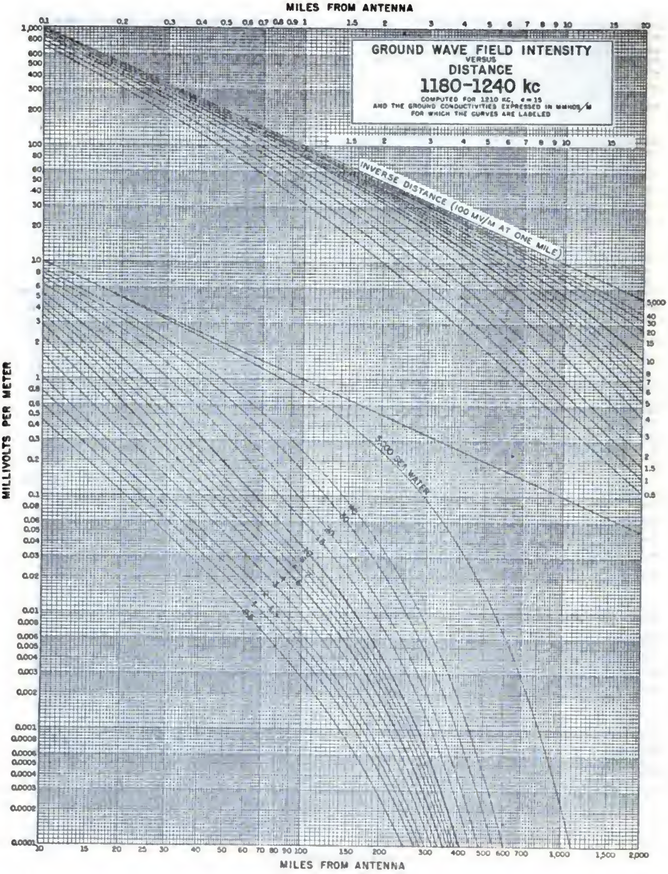
GRAPH 13

FCC–1954



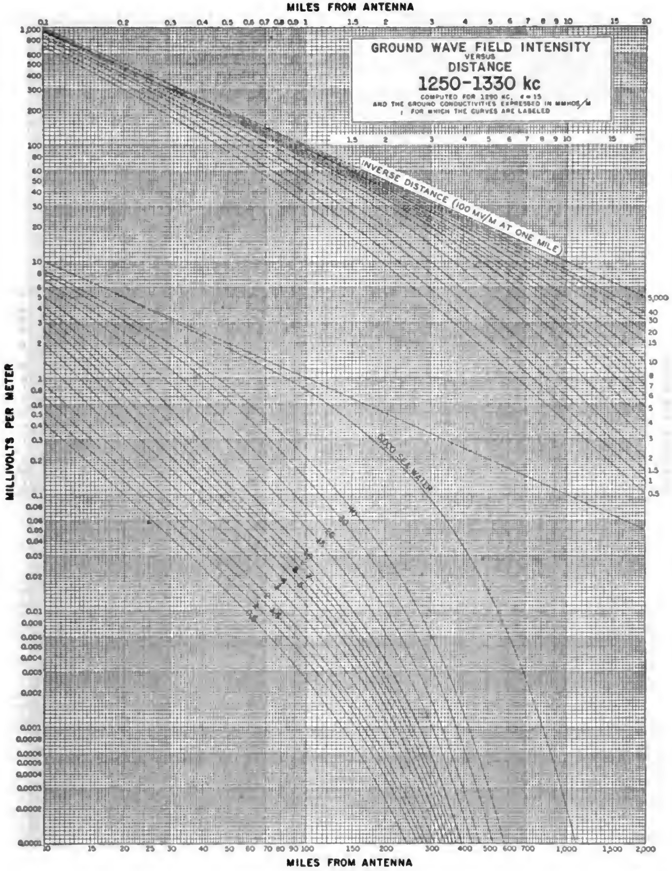
GRAPH 14

FCC-1954



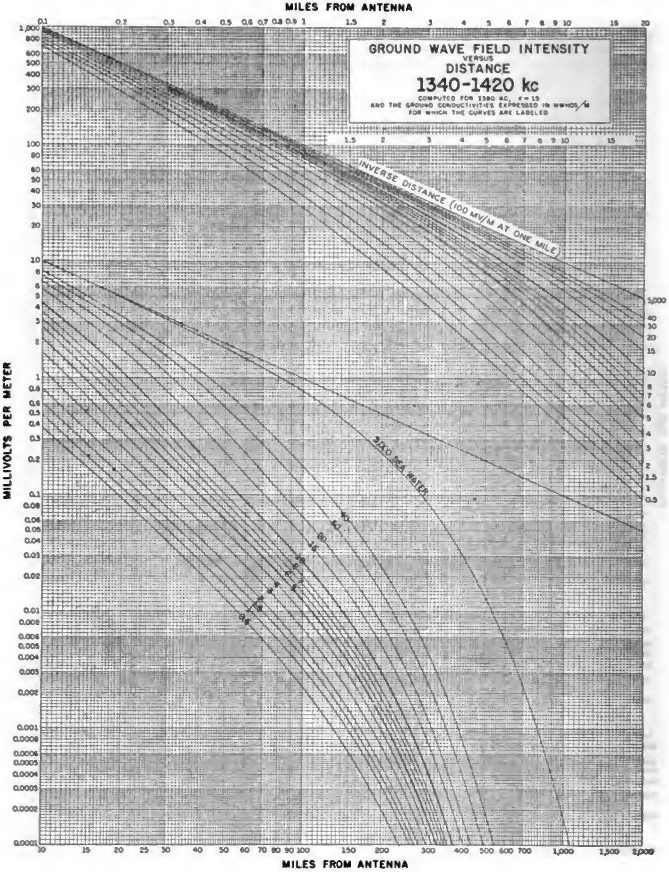
GRAPH 15

FCC-1954



GRAPH 16

FCC-1954



GRAPH 17

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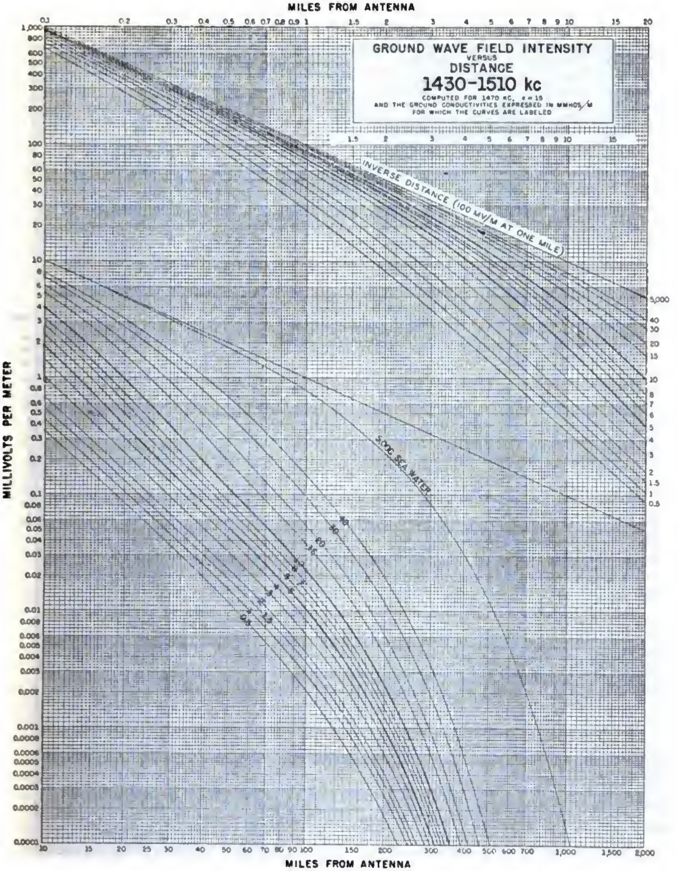
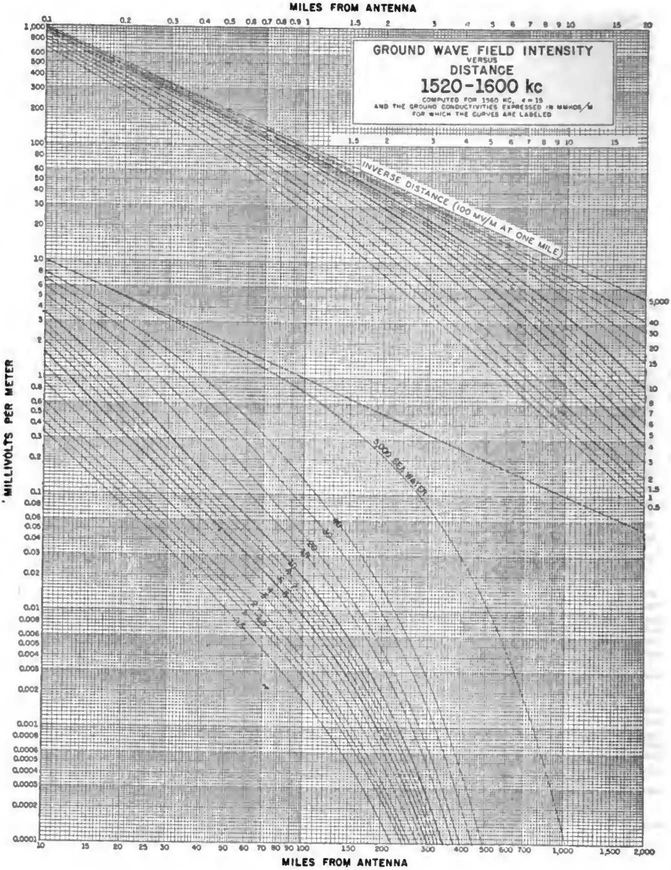


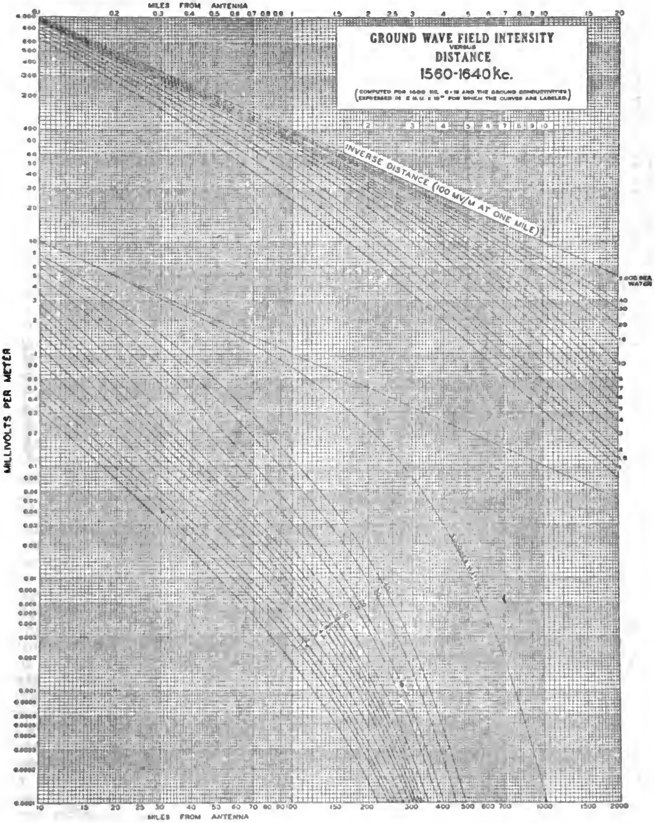
GRAPH 18

FCC-1954

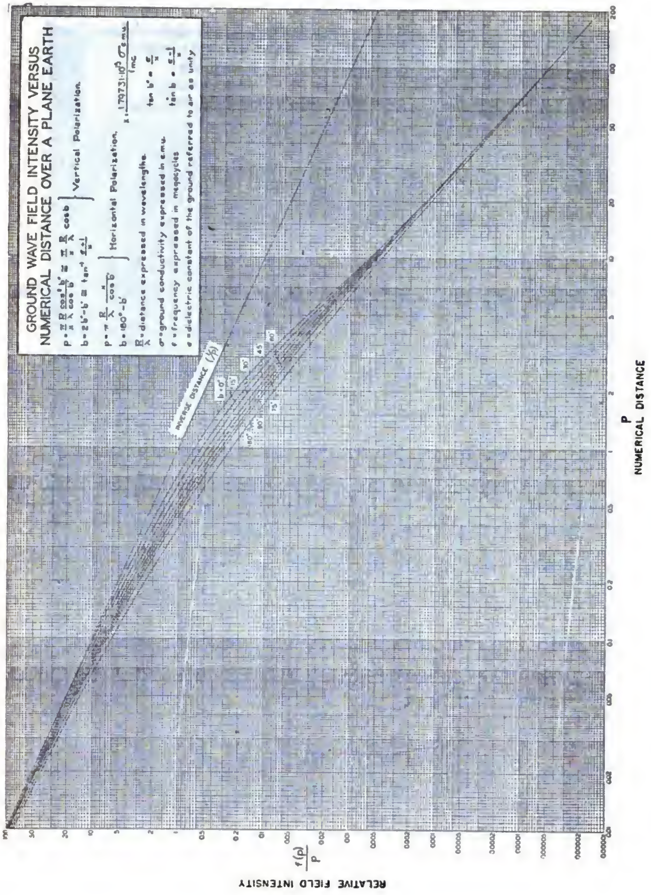


GRAPH 19

FCC-1954


GROUND WAVE FIELD INTENSITY
VERSUS
DISTANCE
1560-1640 Kc.
(COMPUTED FOR 1600 KC, ε=15 AND THE GROUND CONDUCTIVITIES EXPRESSED IN E.M.U. x 10⁻¹⁴ FOR WHICH THE CURVES ARE LABELED)
INVERSE DISTANCE (100 MV/M AT ONE MILE)
MILES FROM ANTENNA
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.5
2
2.5
3
4
5
6
7
8
9
10
15
20
MILLIVOLTS PER METER
5,000 SEA WATER
40
30
20
15
10
8
7
6
5
4
3
2
1.5
1
10
15
20
25
30
40
50
60
70
80
90
100
150
200
300
400
500
600
700
1000
1500
2000
MILES FROM ANTENNA

GRAPH 19-A


GROUND WAVE FIELD INTENSITY VERSUS NUMERICAL DISTANCE OVER A PLANE EARTH
$p = \frac{\pi}{x}\frac{R}{\lambda}\frac{\cos^2 b'}{\cos b} \cong \frac{\pi}{x}\frac{R}{\lambda}\cos b$ Vertical Polarization.
$b = 2b'' - b' \cong \tan^{-1}\frac{\epsilon+1}{x}$
$p = \pi\frac{R}{\lambda}\frac{x}{\cos b}$ Horizontal Polarization.
$b = 180° - b'$
$\frac{R}{\lambda}$ = distance expressed in wavelengths.
σ = ground conductivity expressed in e.m.u.
f = frequency expressed in megacycles
ϵ = dielectric constant of the ground referred to air as unity
$x = \frac{1.79731 \cdot 10^{13}\sigma_{e.m.u.}}{f_{mc}}$
$\tan b' = \frac{\epsilon}{x}$
$\tan b = \frac{\epsilon - 1}{x}$
INVERSE DISTANCE (1/p)
b = 0°
15°
30°
45°
60°
75°
90°
180°
100
50
20
10
5
2
1
0.5
0.2
0.1
0.05
0.02
0.01
0.005
0.002
0.001
0.0005
0.0002
0.0001
0.00005
0.00002
0.00001
$\frac{f(p)}{p}$
RELATIVE FIELD INTENSITY
0.01
0.02
0.05
0.1
0.2
0.5
1
2
5
10
20
50
100
200
p
NUMERICAL DISTANCE

GRAPH 20

§ 73.185 Computation of interfering signal.

(a) In case of an antenna directional in the horizontal plane, the groundwave interference shall be computed from the calculated horizontal pattern by determining the vectors toward the service area of the station to be protected and applying these values to the groundwave curves set out in § 73.184.

(b) For signals from stations operating on clear channels, skywave interference shall be determined from Figures 1a and 6a of § 73.190.

(c) For signals from stations operating on regional and local channels, skywave interference is determined from Figures 2 and 6a of § 73.190. (Certain simplifying assumptions may be made in the case of Class IV stations on local channels. See note to § 73.182(a)(4).)

(d) Figure 6a of § 73.190, entitled "Angles of Departure vs. Transmission Range" is to be used in determining the angles in the vertical pattern of the antenna of an interfering station to be considered as pertinent to transmission by one reflection. To provide for variation in the pertinent vertical angle due to variations of ionosphere height and ionosphere scattering, the curves 4 and 5 indicate the upper and lower angles within which the radiated field is to be considered. The maximum value of field intensity occurring between these angles shall be used to determine the multiplying factor to apply to the 10 percent skywave field intensity value read from Figure 1a or Figure 2 of § 73.190. The multiplying factor is found by dividing the maximum radiation between the pertinent angles by 100 mv/m. (Curves 2 and 3 are considered to represent the variation due to the variation of the effective height of the E-layer while Curves 4 and 5 extend the range of pertinent angles to include a factor which allows for scattering. The dotted lines are included for information only.)

(e) Example of the use of skywave curves for stations operating on clear channels: Assume a Class II station with which interference may be expected is located at a distance of 450 miles from a proposed Class II station. The critical angles of radiation as determined from Figure 6a of § 73.190 are 9.6° and 16.3°. If the vertical pattern of the antenna of the proposed station, in the direction of the other station, is such that between the angles of 9.6° and 16.3° above the horizon the maximum radiation is 160 mv/m at 1 mile, the value of the 10 percent field, as read from Figure 1a of § 73.190, is multiplied by 1.6 to determine the interfering field intensity at the location in question.

(f) For stations operating on regional and local channels, interfering skywave field intensities shall be determined in accordance with the procedure specified in (d) of this section and illustrated in (e) of this section, except that Figure 2 of § 73.190 is used in place of Figure 1a of § 73.190. In using Figure 2 of § 73.190, one additional parameter must be considered, i.e., the variation of received field with the latitude of the path.

(g) Figure 2 of § 73.190, "10 percent Skywave Signal Range Chart," shows the signal as a function of the latitude of the transmission path, which is defined as the geographic latitude of the midpoint between the transmitter and receiver. When using Figure 2 of § 73.190, latitude 35° should be used in case the mid-point of the path lies below 35° North and latitude 50° should be used in case the mid-point of the path lies above 50° North.

(h) In the case of non-directional vertical antennas, the vertical distribution of relative fields for several heights, assuming sinusoidal distribution of current along the antenna, is shown in Figure 5 of § 73.190. In the case of directional antennas the vertical pattern in the great circle direction toward the point of reception in question must first be calculated. In cases where the radiation in the vertical plan, in the pertinent azimuth, contains a large lobe at a higher angle than the pertinent angle for one reflection, the method of calculating interference will not be restricted to that just described, but each such case will be considered on the basis of the best knowledge available.

(i) Example of the use of skywave curves for stations operating on regional and local channels: It is desired to determine the amount of interference to a Class III station at Portland, Oregon, caused by another Class III station at Los Angeles, California. The Los Angeles station is radiating a signal of 560 mv/m at one mile, in the horizontal plane, in the great circle direction of Portland, using a 0.5 wavelength antenna. The distance is 825 miles. From Figure 6a of § 73.190, the upper and lower pertinent angles are 7° and 3.5° and, from Figure 5 of § 73.190, the maximum radiation within these angles is 99 percent of the horizontal radiation or 554 mv/m at one mile. The mid-point latitude of the transmission path is 39.8° N and, from Figure 2 of § 73.190, the 10 percent skywave field at 825 miles is 0.050 mv/m for 100 mv/m radiated. Multiplying by 554/100 to adjust this value to the actual radiation gives 0.277 mv/m as to the interfering signal intensity. At 20 to 1 ratio, the limitation to the Portland station is to the 5.5 mv/m contour.

(j) When the distance is large, more than one reflection may be involved and due consideration must be given each appropriate vector in the vertical pattern, as well as the constants of the earth where reflection takes place between the transmitting station and the service area to which interference may be caused.

NOTE: In applying the provisions of this section to applications tendered on or before September 29, 1965, for new or changed facilities on the clear channels listed in § 73.25 (b), Figure 1 of § 73.190, entitled "Average Skywave Field Intensity," shall be used instead of Figure 1a, and Figure 6 of § 73.190, entitled "Variation with Distance of Two Important Parameters in the Theory of Skywave Propagation" shall be used instead of Figure 6a. In determining skywave interference from an antenna with a vertical pattern different from that on which Figure 1 of § 73.190 is predicated, it is necessary to compare the appropriate vectors in the vertical plane. The skywave curves shown in Figure 1 of § 73.190 are based on antenna systems having height of 0.311 wavelength (112°) and producing a vertical pattern as shown in Figure 5 of § 73.190. A non-directional antenna system, as well as a directional antenna system having vertical patterns other than essentially the same as shown, must be converted to the pattern of a 0.311 wavelength antenna having the same field intensity at the critical angle as does the pattern of the antenna involved.

[30 F.R. 13783, Oct. 29, 1965, as amended at 33 F.R. 15420, Oct. 17, 1968]

§ 73.186 Field intensity measurements in allocation; establishment of effective field at one mile.

(a) Section 73.45 provides that certain minimum field intensities are acceptable in lieu of the required minimum physical vertical heights of the antennas proper. Also, in other allocation problems, it is necessary to determine the effective field at 1 mile. The following requirements shall govern the taking and submission of data on the field intensity produced:

(1) Beginning as near to the antenna as possible without including the induction field and to provide for the fact that a broadcast antenna not being a point source of radiation (not less than one wave length or 5 times the vertical height in the case of a single element, i. e., nondirectional antenna or 10 times the spacing between the elements of a directional antenna), measurements shall be made on eight or more radials, at intervals of approximately one-tenth mile up to 2 miles from the antenna, at intervals of approximately one-half mile from 2 miles to 6 miles from the antenna, at intervals of approximately 2 miles from 6 miles to 15 or 20 miles from the antenna, and a few additional measurements if needed at greater distances from the antenna. Where the antenna is rurally located and unobstructed measurements can be made, there shall be as many as 18 or 20 measurements on each radial. However, where the antenna is located in a city where unobstructed measurements are difficult to make, measurements shall be made on each radial at as many unobstructed locations as possible, even though the intervals are considerably less than stated above, particularly within 2 miles of the antenna. In cases where it is not possible to obtain accurate measurements at the closer distances (even out to 5 or 6 miles due to the character of the intervening terrain), the measurements at greater distances should be made at closer intervals. (It is suggested that "wave tilt" measurements may be made to determine and compare locations for taking field intensity measurements, particularly to determine that there are no abrupt changes in ground conductivity or that reflected waves are not causing abnormal intensities.)

(2) The data required by subparagraph (1) of this paragraph should be plotted for each radial in accordance with either of the two methods set forth below:

(i) Using log-log coordinate paper, plot field intensities as ordinate and distance as abscissa.

(ii) Using semi-log coordinate paper, plot field intensity times distance as ordinate on the log scale and distance as abscissa on the linear scale.

(3) However, regardless of which of the methods in subparagraph (2) of this paragraph is employed, the proper curve to be drawn through the points plotted shall be determined by comparison with the curves in § 73.184 as follows: Place the sheet on which the actual points have

been plotted over the appropriate Graph in § 73.184, hold to the light if necessary and adjust until the curve most closely matching the points is found. This curve should then be drawn on the sheet on which the points were plotted, together with the inverse distance curve corresponding to that curve. The field at 1 mile for the radial concerned shall be the ordinate on the inverse distance curve at 1 mile.

(4) When all radials have been analyzed in accordance with subparagraph (3) of this paragraph, a curve shall be plotted on polar coordinate paper from the fields obtained, which gives the inverse distance field pattern at 1 mile. The radius of a circle, the area of which is equal to the area bounded by this pattern, is the effective field. (See § 73.14.)

(5) The antenna power of the station shall be maintained at the authorized level during all field intensity measurements. The power determination requires a knowledge of the total antenna resistance, which must be accurately measured and modified in accordance with § 73.54(d) in the case of a directional antenna, and of the antenna current, measured by an ammeter of acceptable accuracy (see §§ 73.39 and 73.58).

(b) Complete data taken in conjunction with the field intensity measurements shall be submitted to the Commission in affidavit form including the following:

(1) Tabulation by number of each point of measurement to agree with the map required in (2) below, the date and time of each measurement, the field intensity (E), the distance from the antenna (D) and the product of the field intensity and distance (ED) (if data for each radial are plotted on semilogarithmic paper, see above) for each point of measurement.

(2) Map showing each point of measurement numbered to agree with tabulation required above.

(3) Description of method used to take field intensity measurements.

(4) The family of theoretical curves used in determining the curve for each radial properly identified by conductivity and dielectric constants.

(5) The curves drawn for each radial and the field intensity pattern.

(6) Antenna resistance measurement:

(i) Antenna resistance at operating frequency.

(ii) Description of method employed.

(iii) Tabulation of complete data.

(iv) Curve showing antenna resistance versus frequency.

(7) Antenna current or currents maintained during field intensity measurements.

(8) Description, accuracy, date, and by whom each instrument was last calibrated.

(9) Name, address, and qualifications of the engineer making the measurements.

(10) Any other pertinent information.

[28 F.R. 13574, Dec. 14, 1963, as amended at 34 F.R. 8919, June 4, 1969; 34 F.R. 18305, Nov. 15, 1969]

§ 73.187 Limitation on daytime radiation.

(a)(1) Except as otherwise provided in subparagraphs (2) and (3) of this paragraph, no authorization will be granted for Class II facilities if the proposed facilities would radiate, during the two hours after local sunrise and the two hours before local sunset, toward any point on the 0.1 mv/m contour of a co-channel U.S. Class I station, at or below the pertinent vertical angle determined from Curve 4 of Figure 6a of § 73.190, values in excess of those obtained as provided in paragraph (b) of this section.

(2) The limitation set forth in subparagraph (1) of this paragraph shall not apply in the following cases:

(i) Any Class II facilities authorized before November 30, 1959; or

(ii) For Class II stations authorized before November 30, 1959, subsequent changes of facilities which do not involve a change in frequency, an increase in radiation toward any point on the 0.1 mv/m contour of a co-channel U.S. Class I station, or the move of transmitter site materially closer to the 0.1 mv/m contour of such Class I stations.

(3) If a Class II station authorized before November 30, 1959, is authorized to increase its daytime radiation in any direction toward the 0.1 mv/m contour of a co-channel U.S. Class I station (without a change in frequency or a move of transmitter site materially closer to such contour), it may not, during the two hours after local sunrise or the two hours before local sunset, radiate in such directions a value exceeding the higher of:

(i) The value radiated in such directions with facilities last authorized before November 30, 1959, or

(ii) The limitation specified in subparagraph (1) of this paragraph.

(b) To obtain the maximum permissible radiation for a Class II station on a given frequency ($f_{kc/s}$) from 640 kc/s through 990 kc/s, multiply the radiation value obtained for the given distance and azimuth from the 500 kc/s chart (Figure 9 of § 73.190) by the appropriate interpolation factor shown in the K_{500} column of paragraph (c) of this section; and multiply the radiation value obtained for the given distance and azimuth from the 1000 kc/s chart (Figure 10 of § 73.190) by the appropriate interpolation factor shown in the K_{1000} column of paragraph (c) of this section. Add the two products thus obtained; the result is the maximum radiation value applicable to the Class II station in the pertinent directions. For frequencies from 1010 kc/s to 1580 kc/s, obtain in a similar manner the proper radiation values from the 1000 kc/s and 1600 kc/s charts (Figures 10 and 11 of § 73.190), multiply each of these values by the appropriate interpolation factors in the K'_{1000} and K'_{1600} columns in paragraph (c) of this section, and add the products.

(c) Interpolation factors. (1) Frequencies below 1000 kc/s.

$f_{kc/s}$	K_{500}	K_{1000}	$f_{kc/s}$	K_{500}	K_{1000}
640	0.720	0.280	780	0.440	0.560
650	0.700	0.300	800	0.400	0.600
660	0.680	0.320	810	0.380	0.620
670	0.660	0.340	820	0.360	0.640
680	0.640	0.360	830	0.340	0.660
690	0.620	0.380	840	0.320	0.680
700	0.600	0.400	850	0.300	0.700
710	0.580	0.420	860	0.280	0.720
720	0.560	0.440	870	0.260	0.740
730	0.540	0.460	880	0.240	0.760
740	0.520	0.480	890	0.220	0.780
750	0.500	0.500	900	0.200	0.800
760	0.480	0.520	940	0.120	0.880
770	0.460	0.540	990	0.020	0.980

(2) Frequencies above 1000 kc/s.

$f'_{kc/s}$	K'_{1000}	K'_{1600}	$f'_{kc/s}$	K'_{1600}	K'_{1600}
1010	0.983	0.017	1170	0.717	0.283
1020	0.967	0.033	1180	0.700	0.300
1030	0.950	0.050	1190	0.683	0.317
1040	0.933	0.067	1200	0.667	0.333
1050	0.917	0.083	1210	0.650	0.350
1060	0.900	0.100	1220	0.633	0.367
1070	0.883	0.117	1500	0.167	0.833
1080	0.867	0.133	1510	0.150	0.850
1000	0.850	0.150	1520	0.133	0.867
1100	0.833	0.167	1530	0.117	0.883
1110	0.817	0.183	1540	0.100	0.900
1120	0.800	0.200	1550	0.083	0.917
1130	0.783	0.217	1560	0.067	0.933
1140	0.767	0.233	1570	0.050	0.950
1160	0.733	0.267	1580	0.033	0.967

§ 73.188 Location of transmitters.

(a) The four primary objectives to be obtained in the selection of a site for a transmitter of a broadcast station are as follows:

(1) To serve adequately the center of population in which the studio is located and to give maximum coverage to adjacent areas.

(2) To cause and experience minimum interference to and from other stations.

(3) To present a minimum hazard to air navigation consistent with objectives (1) and (2).

(4) To fulfill certain other requirements given in the following paragraphs of this section.

(b) The site selected should meet the following conditions:

(1) A minimum field intensity of 25 to 50 mv/m will be obtained over the business or factory areas of the city.

(2) A minimum field intensity of 5 to 10 mv/m will be obtained over the most distant residential section.

(3) The adsorption of the signal is the minimum for any obtainable sites in the area. As a guide in this respect the absorption of the signals from other stations in that area should be followed, as well as the results of tests on other sites.

(4) The population within the blanket contour does not exceed that specified by § 73.24(g).

(c) In selecting a site in the center of a city it is usually necessary to place the radiating system on the top of a building. This building should be large enough to permit the installation of a satisfactory ground and/or counterpoise system. Great care must be taken to avoid selecting a building surrounded by taller buildings or where any nearby building higher than the antenna is located in the direction which it is desired to serve. Such a building will tend to cast "radio shadows" which may materially reduce the coverage of the station in that direction. Irrespective of the height of surrounding buildings, the building on which the antenna is located should not have height of approximately one-quarter wavelength. A study of antenna systems located on buildings tends to indicate that where the building is approximately a quarter wavelength in height, the efficiency of radiation may be materially reduced.

(d) Particular attention must be given to avoiding cross-modulation. In this connection, attention is invited to the fact that it has been found very unsatisfactory to locate broadcast stations so that high signal intensities occur in areas with overhead electric power or telephone distribution systems and sections where the wiring and plumbing are old or improperly installed. These areas are usually found in the older sections of a city. These conditions give rise to cross-modulation interference due to the nonlinear conductivity characteristics of contacts between wiring, plumbing, or other conductors. This type of interference is independent of the selectivity characteristics of the receiver and normally can be eliminated only by correction of the condition causing the interference. Cross-modulation tends to increase with frequency and in some areas it has been found impossible to eliminate all sources of cross-modulation, resulting in an unsatisfactory condition for both licensee and listeners. The Commission will not authorize (1) new stations, (2) a major change of facilities of existing stations, (3) a change in transmitter location of an existing station, or (4) auxiliary transmitters, for use with other than the authorized antenna system of the main transmitter, if such new stations, physical facilities of existing stations after a major change, transmitters or auxiliary transmitters would be located in such areas or would utilize a roof-top antenna and the operating power would be in excess of 1000 watts.

(e) If it is determined that a site should be selected removed from the city, there are several general conditions to be followed in determining the exact site. Three maps should be given consideration if available:

(1) Map of the density of population and number of people by sections in the area. (See Bureau of Census series P-D and H-E available from Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.)

(2) Geographical contour map with contour intervals of 20 to 50 feet.

(3) Map showing the type, nature and depth of the soil in the area with special reference to the condition of the moisture throughout the year.

From these maps a site should be selected with a minimum number of intervening hills between it and the center of the city. In general, because of ground conditions, it is better to select a site in a low area rather than on top of a hill, and the only condition under which a site on top of a hill should be selected is that it is only possible by this means to avoid a substantial number of hills, between the site and the center of a city with the resulting radio shadows. If a site is to be selected to serve a city which is on a general sloping area, it is generally better to select a site below the city than above the city.

(f) If a compromise must be made between probable radio shadows from intervening hills and locating the transmitter on top of a hill, it is generally better to compromise in favor of the low area, where an efficient radiating system may be installed which will more than compensate for losses due to shadows being caused by the hills, if not too numerous or too high. Several transmitters have been located on tops of hills, but so far as data has been supplied not a single installation has given superior efficiency of propagation and coverage.

(g) The ideal location of a broadcast transmitter is in a low area of marshy or "crawfishy' soil or area which is damp the maximum percentage of time and from which a clear view over the entire center of population may be had and the tall buildings in the business section of the city would cast a shadow across the minimum residential area.

(h) The type and condition of the soil or earth immediately around a site is very important. Important, to an equal extent, is the soil or earth between the site and the principal area to be served. Sandy soil is considered the worst type, with glacial deposits and mineral-ore areas next. Alluvial, marshy areas and salt-water bogs have been found to have the least absorption of the signal. One is fortunate to have available such an area and, if not available, the next best condition must be selected.

(i) Figure M3 (See Note to § 73.183 (c)) and Figure R3 of § 73.190 indicate effective conductivity values in the United States, and are to be used for determining the extent of broadcast station coverage when adequate field intensity measurements over the path in question are not available. Since the values specified are only for general areas and since conductivity values over particular paths may vary widely from those shown, caution must be exercised in using the maps for selection of a satisfactory transmitter site. Where the submission of field intensity measurements is deemed necessary or advisable, the Commission, in its discretion, may require an applicant for new or changed broadcast facilities to submit such data in support of its application.

(j) In general, broadcast transmitters operating with approximately the same power can be grouped in the same approximate area and thereby reduce the interference between them. If the city is of irregular shape, it is often possible to take advantage of this in selecting a suitable location that will give a maximum coverage. The maps giving the density of population will be a key to this. The map giving the elevation by contours will be a key to the obstructing hills between the site and city. The map of the soil conditions will assist in determining the efficiency of the radiating system that may be erected and the absorption of the signal encountered in the surrounding area.

(k) Another factor to be considered is the relation of the site to airports and airways. Procedures and standards with respect to the Commission's consideration of proposed antenna structures which will serve as a guide to persons intending to apply for radio station licenses are contained in Part 17 of this chapter (Construction, Marking, and Lighting of Antenna Structures).

(l) In finally selecting the site, consideration must be given to the required space for erecting an efficient radiating system, including the ground or counterpoise. It is the general practice to use direct grounds consisting of a radial buried wire system. If the area is such that it is not possible to get such ground system in soil that remains moist throughout the year, it probably will be found better to erect a counterpoise. (Such a site should be selected only as a last resort.) It, like the antenna itself, must of course be designed properly for the operating frequency and other local conditions.

(m) While an experienced engineer can sometimes select a satisfactory site for a 100-watt station by inspection, it is necessary for a higher power station to make a field-intensity survey to determine that the site selected will be entirely satisfactory. There are several facts that cannot be determined by inspection that make a survey very desirable for all locations removed from the city. Often two or more sites may be selected that appear to be of equal promise. It is only by means of field-intensity surveys taken with a transmitter at the different sites or from measurements on the signal of nearby stations traversing the terrain involved that the most desirable site can be determined. There are many factors regarding site efficiency that cannot be determined by any other method. When making the final selection of a site, the need for a field-intensity survey to establish the exact conditions cannot be stressed too strongly. The selection of a proper site for a broadcast station is an important engineering problem and can only be done properly by experienced radio engineers.

§ 73.189 Minimum antenna heights or field intensity requirements.

(a) Section 73.45 requires that all applicants for new, additional, or different broadcast facilities and all licensees requesting authority to move the transmitter of an existing station, shall specify a radiating system, the efficiency of which complies with the requirements of good engineering practice for the class and power of the station.

(b) The specifications deemed necessary to meet the requirements of good engineering practice at the present state of the art are set out in detail below.

(1) The licensee of a standard broadcast station requesting a change in power, time of operation, frequency, or transmitter location must also request authority to install a new antenna system or to make changes in the existing antenna system which will meet the

minimum height requirements, or submit evidence that the present antenna system meets the minimum requirements with respect to field intensity, before favorable consideration will be given thereto. (See § 73.186.) In the event it is proposed to make substantial changes in an existing antenna system, the changes shall be such as to meet the minimum height requirements or will be permitted subject to the submission of field intensity measurements showing that it meets the minimum requirements with respect to effective field intensity.

(2) These minimum actual physical vertical heights of antennas permitted to be installed are shown by curves A, B, and C of Figure 7 of § 73.190 as follows:

(i) Class IV stations, 150 feet or a minimum effective field intensity of 150 mv/m for 1 kilowatt (75 mv/m for 250 watts). (This height applies to a Class IV station on a local channel only. In the case of a Class IV station assigned to a regional channel Curve A shall apply.)

(ii) Class II and III stations, a minimum effective field intensity of 175 mv/m for 1 kilowatt.

(iii) Class I stations, a minimum effective field intensity of 225 mv/m for 1 kilowatt.

(3) The heights given on the graph for the antenna apply regardless of whether the antenna is located on the ground or on a building. Except for the reduction of shadows, locating the antenna on a building does not necessarily increase the efficiency and where the height of the building is in the order of a quarter wave the efficiency may be materially reduced.

(4) To obtain the maximum efficiency of which any antenna is capable a good ground system must be employed (a counterpoise may be substituted under certain conditions).

(5) At the present development of the art, it is considered that where a vertical radiator is employed with its base on the ground, the ground system should consist of buried radial wires at least one-fourth wave length long. There should be as many of these radials evenly spaced as practicable and in no event less than 90. (120 radials of 0.35 to 0.4 of a wave length in length and spaced 3° is considered an excellent ground system and in case of high base voltage, a base screen of suitable dimensions should be employed.)

(6) It should be borne in mind that the above specifications are the minimums and where possible better antenna and ground systems should be installed.

(7) In case it is contended that the required antenna efficiency can be obtained with an antenna of height or ground system less than the minimum specified, a complete field intensity survey must be supplied to the Commission showing that the field intensity at a mile without absorption fulfills the minimum requirements. (See § 73.186.) This field survey must be made by a qualified engineer using equipment of acceptable accuracy.

(8) The main element or elements of a directional antenna system shall meet the above minimum requirements with respect to height or effective field intensity. No directional antenna system will be approved which is so designed that the effective field of the array is less than the minimum prescribed for the class of station concerned, or in case of a Class I station less than 90 percent of the ground wave field which would be obtained from a perfect antenna of the height specified by Figure 7 of § 73.190 for operation on frequencies below 1000 kilocycles, and in the case of a Class II or III station less than 90 percent of the ground wave field which would be obtained from a perfect antenna of the height specified by Figure 7 of § 73.190 for operation on frequencies below 750 kilocycles.

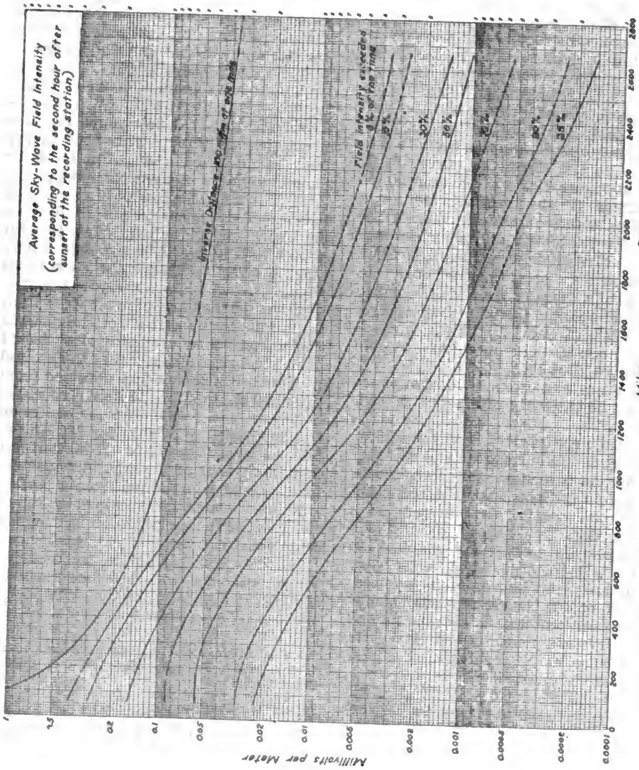
(9) Before any changes are made in the antenna system, it is necessary to submit full details to the Commission for approval. These data may be submitted by letter.

[28 F.R. 13574, Dec. 14, 1963, as amended at 31 F.R. 8069, June 8, 1966; 33 F.R. 15420, Oct. 17, 1968]

§ 73.190 Engineering charts.

This section consists of the following figures: 1, 1a, 2, R3, 5, 6, 6a, 7, 8, 9, 10, 11, and 12.

NOTE: The charts as reproduced herein, due to their small scale, are not to be used in connection with material submitted to the F.C.C.



These curves are not considered to be sufficiently accurate for practical use for distances less than approximately 250 miles.

FIGURE 1

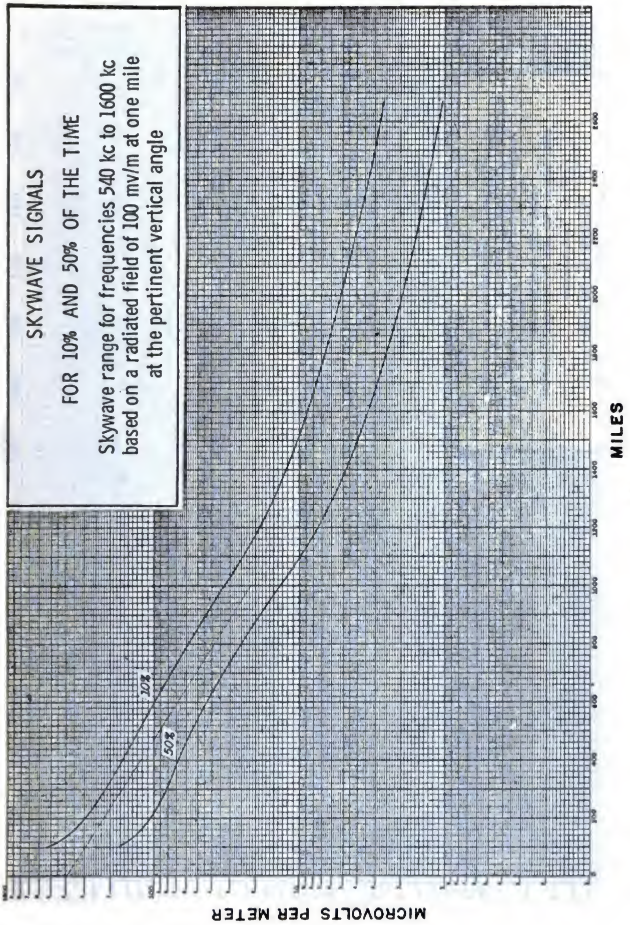

SKYWAVE SIGNALS
FOR 10% AND 50% OF THE TIME
Skywave range for frequencies 540 kc to 1600 kc based on a radiated field of 100 mv/m at one mile at the pertinent vertical angle
10%
50%
1000
100
10
MICROVOLTS PER METER
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
MILES

FIGURE 1a.

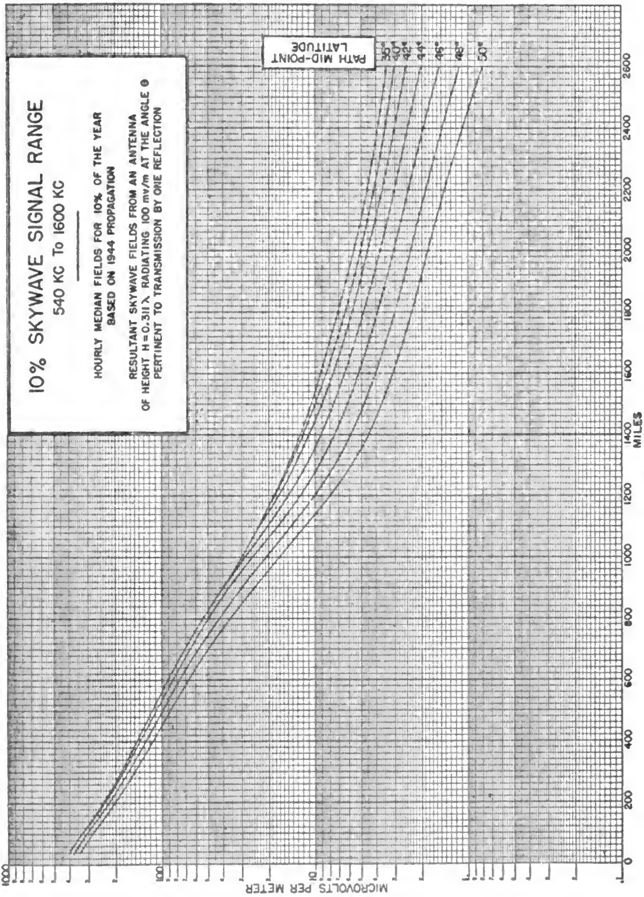

10% SKYWAVE SIGNAL RANGE
540 KC To 1600 KC
HOURLY MEDIAN FIELDS FOR 10% OF THE YEAR BASED ON 1944 PROPAGATION
RESULTANT SKYWAVE FIELDS FROM AN ANTENNA OF HEIGHT H=0.311 λ RADIATING 100 mv/m AT THE ANGLE θ PERTINENT TO TRANSMISSION BY ONE REFLECTION
PATH MID-POINT LATITUDE
35°
40°
42°
44°
46°
48°
50°
MICROVOLTS PER METER
1000
100
10
1
MILES
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600

FIGURE 2.

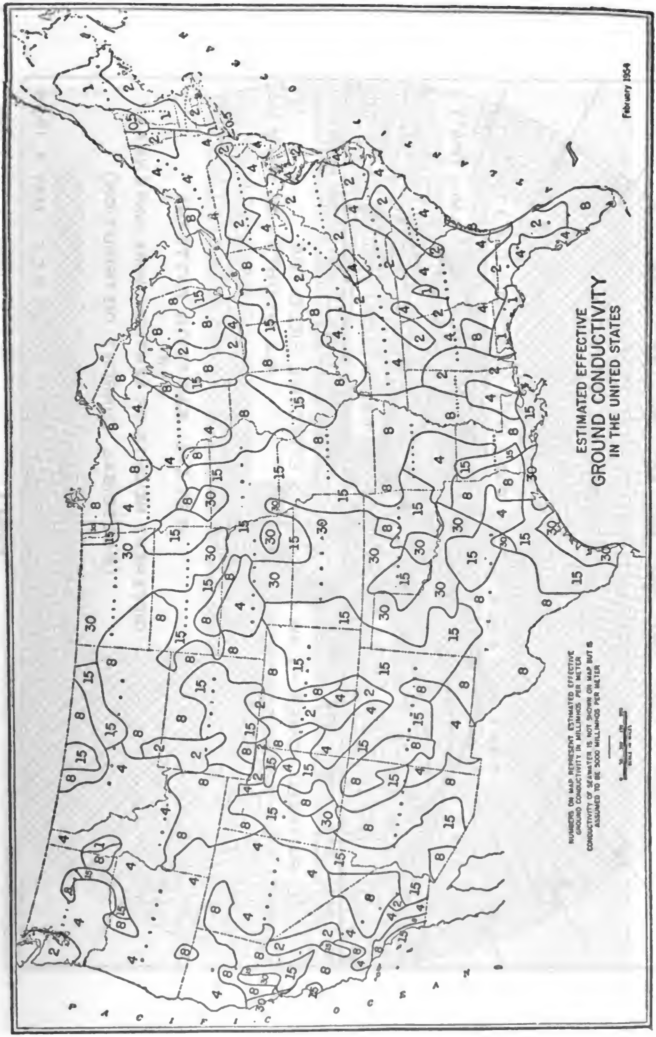

ESTIMATED EFFECTIVE
GROUND CONDUCTIVITY
IN THE UNITED STATES
February 1954
NUMBERS ON MAP REPRESENT ESTIMATED EFFECTIVE GROUND CONDUCTIVITY IN MILLIMHOS PER METER
CONDUCTIVITY OF SEAWATER IS NOT SHOWN ON MAP BUT IS ASSUMED TO BE 5000 MILLIMHOS PER METER
PACIFIC OCEAN

FIGURE B3.

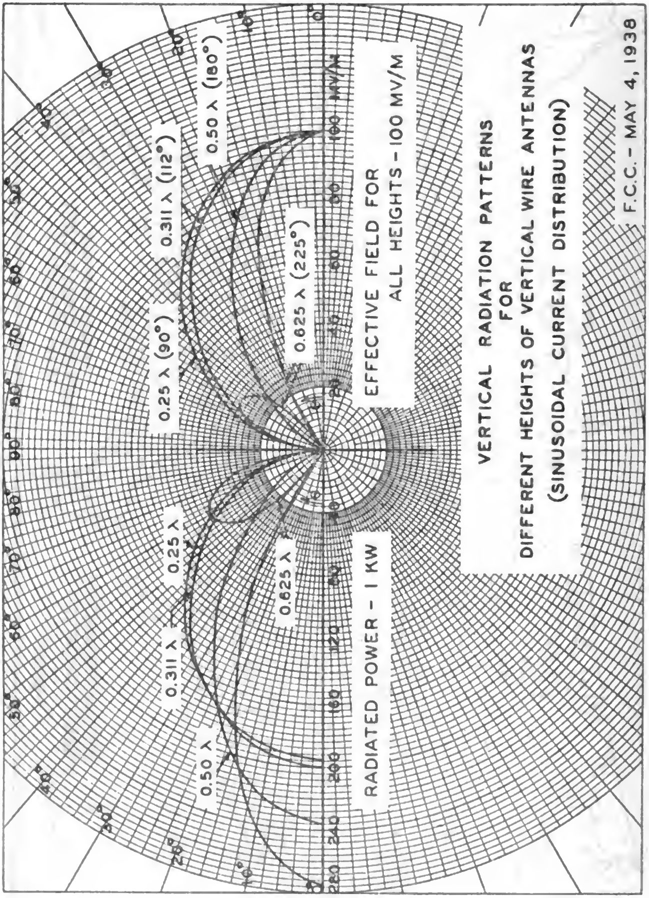

VERTICAL RADIATION PATTERNS
FOR
DIFFERENT HEIGHTS OF VERTICAL WIRE ANTENNAS
(SINUSOIDAL CURRENT DISTRIBUTION)
EFFECTIVE FIELD FOR
ALL HEIGHTS - 100 MV/M
RADIATED POWER - 1 KW
0.25 λ (90°)
0.311 λ (112°)
0.50 λ (180°)
0.625 λ (225°)
0.25 λ
0.311 λ
0.50 λ
0.625 λ
0°
10°
20°
30°
40°
50°
60°
70°
80°
90°
20
40
60
80
100 MV/M
40
80
120
160
200
240
280
F.C.C. - MAY 4, 1938

Figure 5.

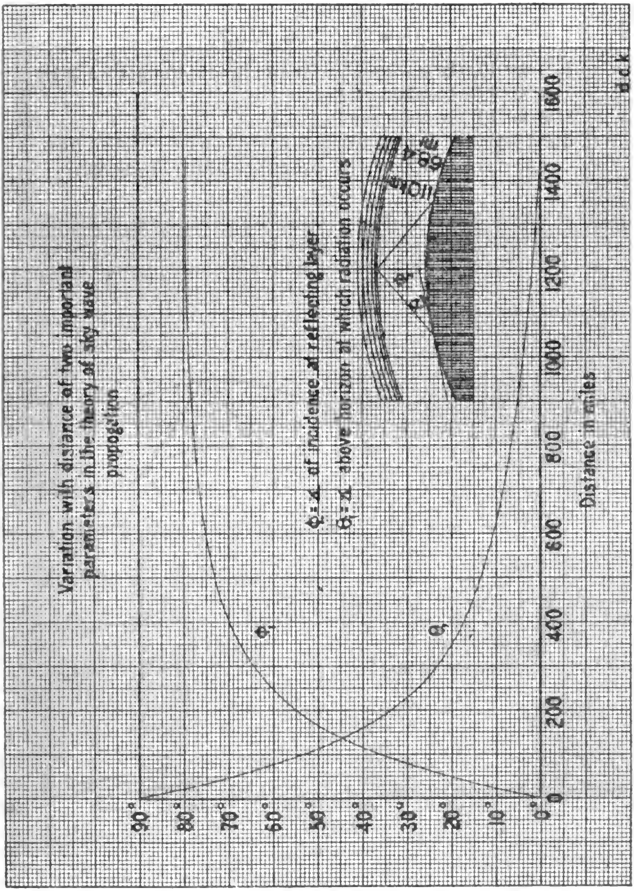

Variation with distance of two important parameters in the theory of sky wave propagation
Φ_1 = ∡ of incidence at reflecting layer
θ_1 = ∡ above horizon at which radiation occurs
110 km
Φ_1
θ_1
90°
80°
70°
60°
50°
40°
30°
20°
10°
0°
0
200
400
600
800
1000
1200
1400
1600
Distance in miles

FIGURE 6.

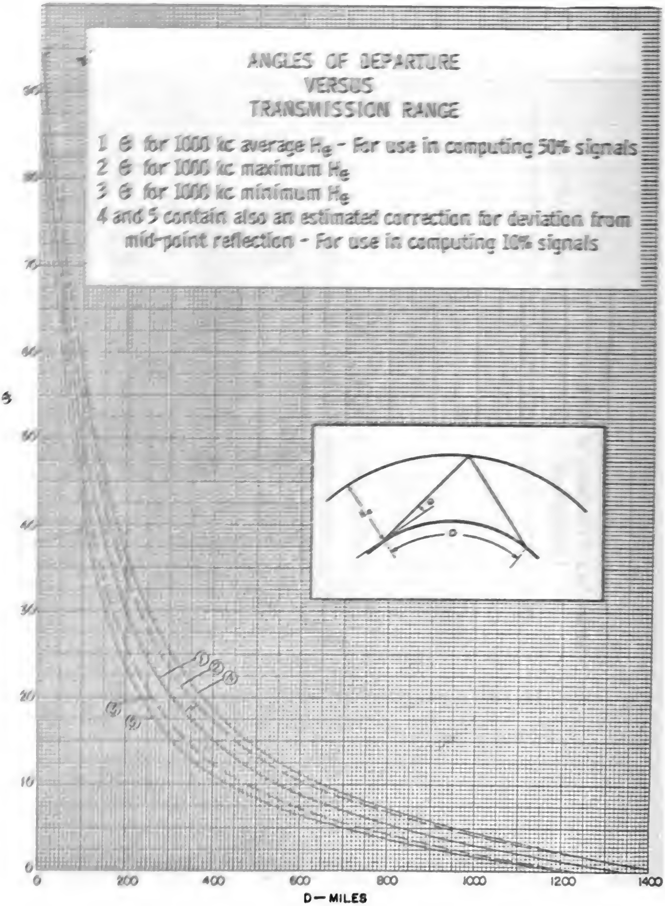

ANGLES OF DEPARTURE
VERSUS
TRANSMISSION RANGE
1 θ for 1000 kc average H_e - For use in computing 50% signals
2 θ for 1000 kc maximum H_e
3 θ for 1000 kc minimum H_e
4 and 5 contain also an estimated correction for deviation from mid-point reflection - For use in computing 10% signals
θ
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
H_e
D
0
200
400
600
800
1000
1200
1400
D—MILES

FIGURE 6a.

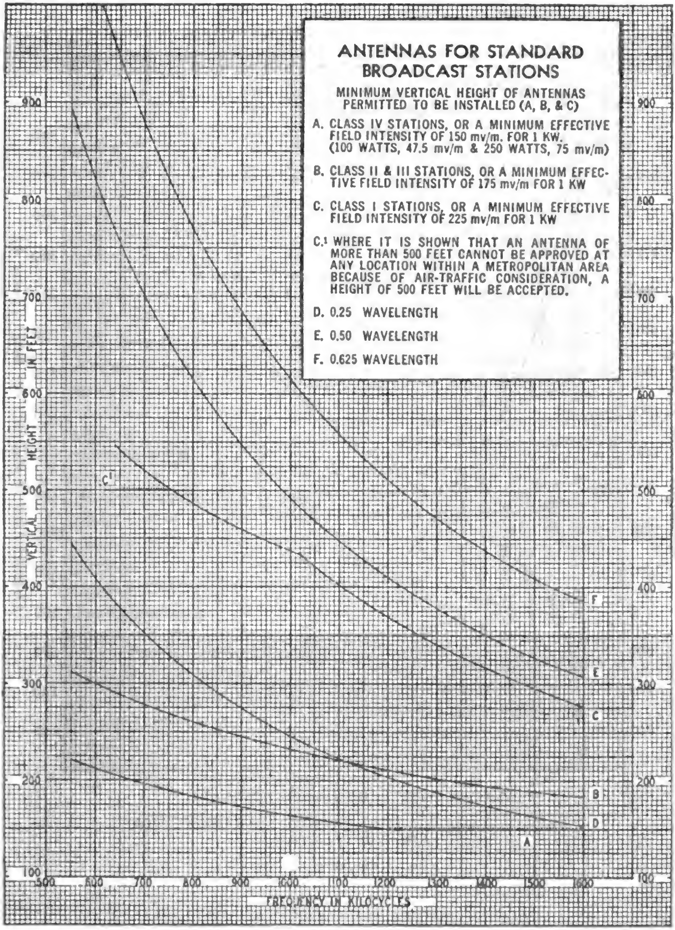

ANTENNAS FOR STANDARD BROADCAST STATIONS
MINIMUM VERTICAL HEIGHT OF ANTENNAS PERMITTED TO BE INSTALLED (A, B, & C)
A. CLASS IV STATIONS, OR A MINIMUM EFFECTIVE FIELD INTENSITY OF 150 mv/m. FOR 1 KW. (100 WATTS, 47.5 mv/m & 250 WATTS, 75 mv/m)
B. CLASS II & III STATIONS, OR A MINIMUM EFFECTIVE FIELD INTENSITY OF 175 mv/m FOR 1 KW
C. CLASS I STATIONS, OR A MINIMUM EFFECTIVE FIELD INTENSITY OF 225 mv/m FOR 1 KW
C.¹ WHERE IT IS SHOWN THAT AN ANTENNA OF MORE THAN 500 FEET CANNOT BE APPROVED AT ANY LOCATION WITHIN A METROPOLITAN AREA BECAUSE OF AIR-TRAFFIC CONSIDERATION, A HEIGHT OF 500 FEET WILL BE ACCEPTED.
D. 0.25 WAVELENGTH
E. 0.50 WAVELENGTH
F. 0.625 WAVELENGTH
VERTICAL HEIGHT IN FEET
900
800
700
600
500
400
300
200
100
C¹
F
E
C
B
D
A
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
FREQUENCY IN KILOCYCLES

Figure 7.

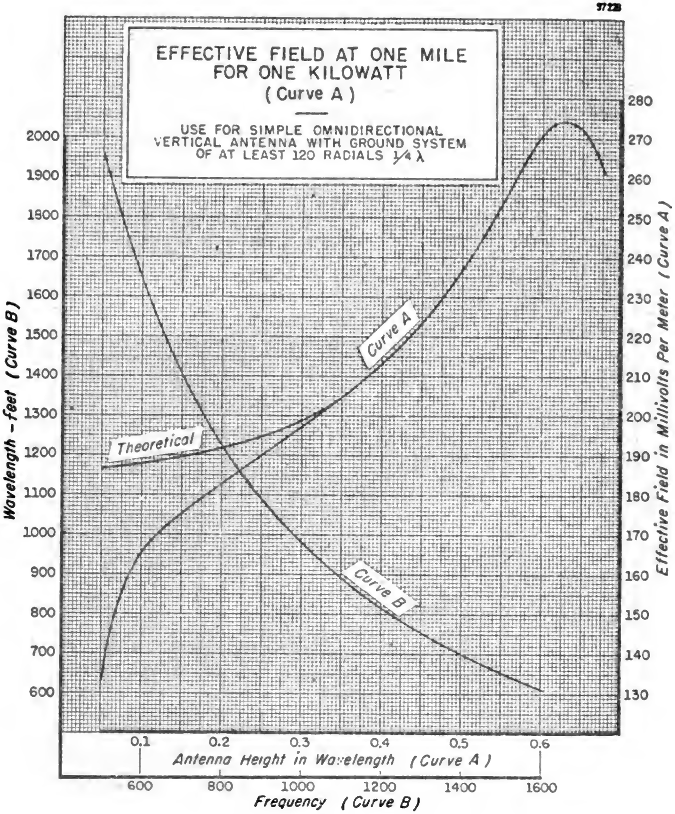

9728
EFFECTIVE FIELD AT ONE MILE
FOR ONE KILOWATT
(Curve A)
USE FOR SIMPLE OMNIDIRECTIONAL VERTICAL ANTENNA WITH GROUND SYSTEM OF AT LEAST 120 RADIALS 1/4 λ
Wavelength - feet (Curve B)
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
Effective Field in Millivolts Per Meter (Curve A)
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
Theoretical
Curve A
Curve B
0.1
0.2
0.3
0.4
0.5
0.6
Antenna Height in Wavelength (Curve A)
600
800
1000
1200
1400
1600
Frequency (Curve B)

Figure 8.

PERMISSIBLE DAYTIME RADIATION
FOR CLASS II STATIONS

500 KC

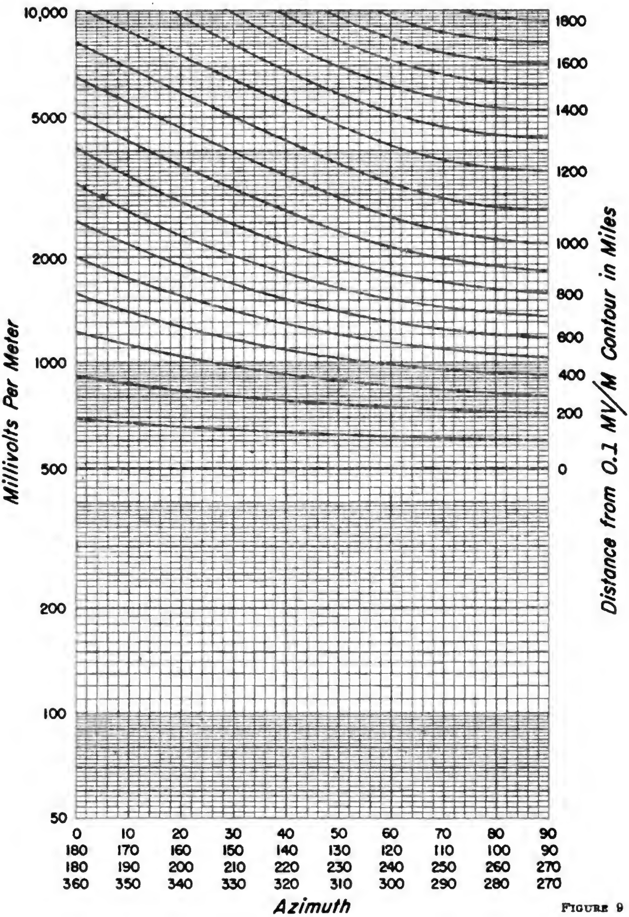


FIGURE 9

PERMISSIBLE DAYTIME RADIATION
FOR CLASS II STATIONS

1000 KC

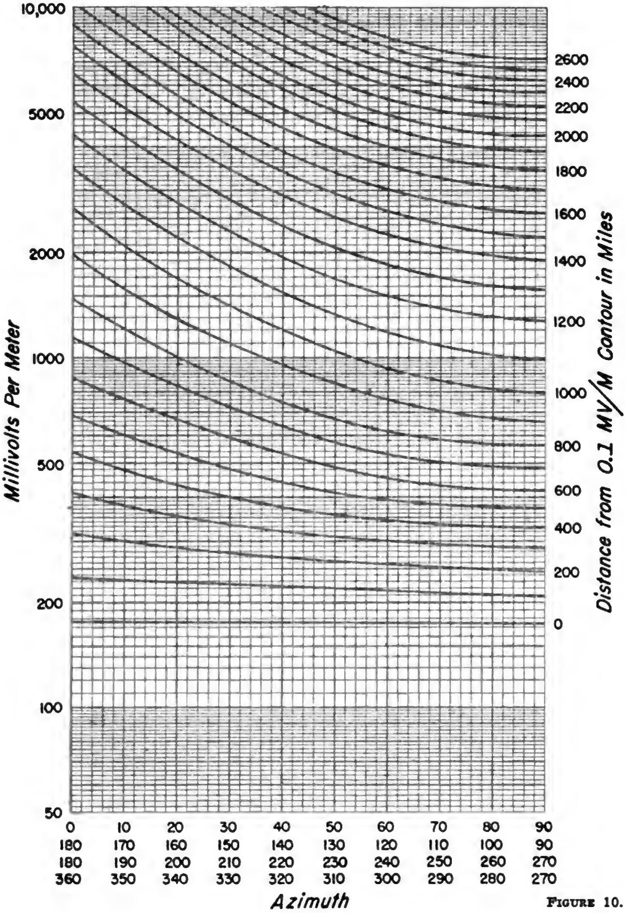


FIGURE 10.

PERMISSIBLE DAYTIME RADIATION
FOR CLASS II STATIONS
1600 KC

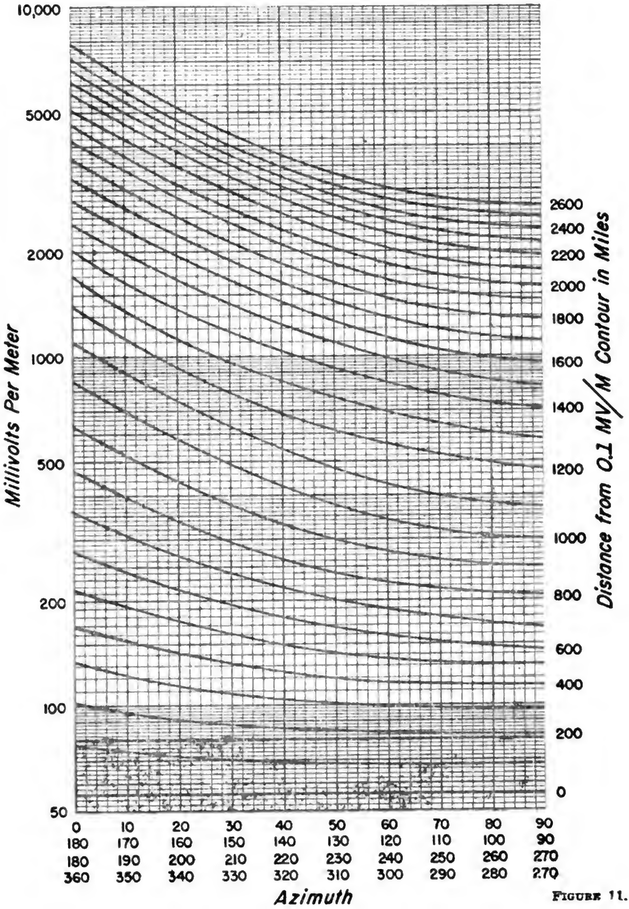


FIGURE 11.

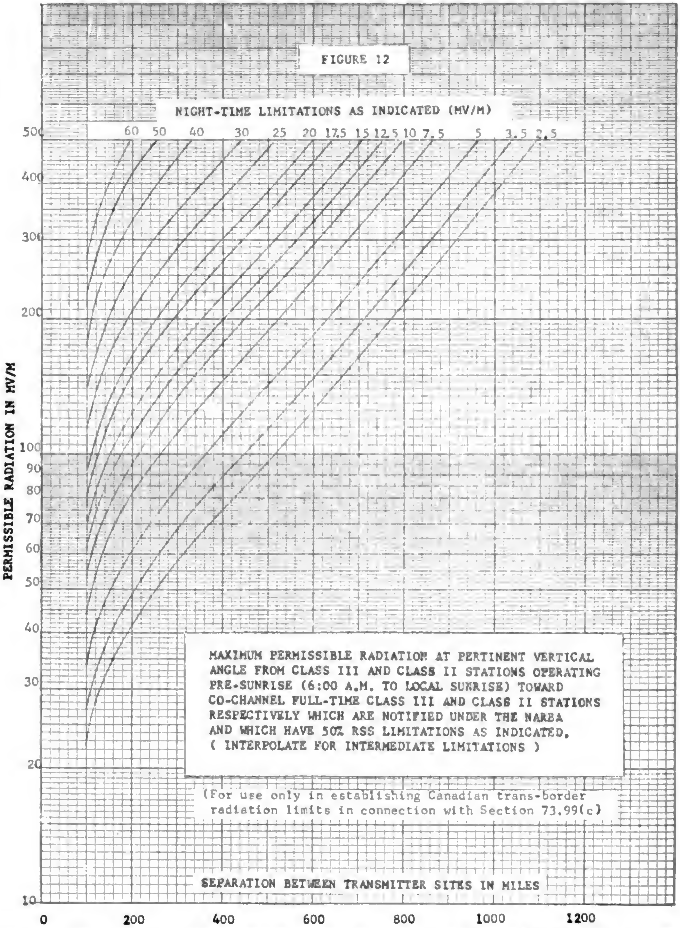


FIGURE 12

MAXIMUM PERMISSIBLE RADIATION AT PERTINENT VERTICAL ANGLE FROM CLASS III AND CLASS II STATIONS OPERATING PRE-SUNRISE (6:00 A.M. TO LOCAL SUNRISE) TOWARD CO-CHANNEL FULL-TIME CLASS III AND CLASS II STATIONS RESPECTIVELY WHICH ARE NOTIFIED UNDER THE NARBA AND WHICH HAVE 50% RSS LIMITATIONS AS INDICATED. (INTERPOLATE FOR INTERMEDIATE LIMITATIONS)

(For use only in establishing Canadian trans-border radiation limits in connection with Section 73.99(c))

NIGHT-TIME LIMITATIONS AS INDICATED (MV/M)
60
50
40
30
25
20
17.5
15
12.5
10
7.5
5
3.5
2.5
PERMISSIBLE RADIATION IN MV/M
500
400
300
200
100
90
80
70
60
50
40
30
20
10
SEPARATION BETWEEN TRANSMITTER SITES IN MILES
0
200
400
600
800
1000
1200

[28 F.R. 13574, Dec. 14, 1963, as amended at 30 F.R. 12720, Oct. 6, 1965; 30 F.R. 13783, Oct. 29, 1965, 32 F.R. 10447, July 15, 1967; 32 F.R. 10794, July 22, 1967; 33 F.R. 15420, Oct. 17, 1968]

Subpart B—FM Broadcast Stations

SOURCE: The provisions of this Subpart B appear at 28 F.R. 13623, Dec. 14, 1963, unless otherwise noted.

CLASSIFICATION OF FM BROADCAST STATIONS AND ALLOCATION OF FREQUENCIES

§ 73.201 Numerical designation of FM broadcast channels.

The FM broadcast band consists of that portion of the radio frequency spectrum between 88 megacycles per second (Mc/s) and 108 Mc/s. It is divided into 100 channels of 200 kilocycles per second (kc/s) each. For convenience, the frequencies available for FM broadcasting (including those assigned to noncommercial educational broadcasting) are given numerical designations which are shown in the table below:

Frequency (Mc/s)	Channel No.	Frequency (Mc/s)	Channel No.
88.1	201	96.9	245
88.3	202	97.1	246
88.5	203	97.3	247
88.7	204	97.5	248
88.9	205	97.7	249
89.1	206	97.9	250
89.3	207	98.1	251
89.5	208	98.3	252
89.7	209	98.5	253
89.9	210	98.7	254
90.1	211	98.9	255
90.3	212	99.1	256
90.5	213	99.3	257
90.7	214	99.5	258
90.9	215	99.7	259
91.1	216	99.9	260
91.3	217	100.1	261
91.5	218	100.3	262
91.7	219	100.5	263
91.9	220	100.7	264
92.1	221	100.9	265
92.3	222	101.1	266
92.5	223	101.3	267
92.7	224	101.5	268
92.9	225	101.7	269
93.1	226	101.9	270
93.3	227	102.1	271
93.5	228	102.3	272
93.7	229	102.5	273
93.9	230	102.7	274
94.1	231	102.9	275
94.3	232	103.1	276
94.5	233	103.3	277
94.7	234	103.5	278
94.9	235	103.7	279
95.1	236	103.9	280
95.3	237	104.1	281
95.5	238	104.3	282
95.7	239	104.5	283
95.9	240	104.7	284
96.1	241	104.9	285
96.3	242	105.1	286
96.5	243	105.3	287
96.7	244	105.5	288
105.7	289	106.9	295
105.9	290	107.1	296
106.1	291	107.3	297
106.3	292	107.5	298
106.5	293	107.7	299
106.7	294	107.9	300

NOTE: The frequency 108.0 Mc/s may be assigned to VOR test stations subject to the condition that interference is not caused to the reception of FM broadcasting stations, present or future.

[28 F.R. 13623, Dec. 14, 1963, as amended at 30 F.R. 4480, Apr. 7, 1965; 33 F.R. 15420, Oct. 17, 1968]

§ 73.202 Table of Assignments.

(a) *General.* The following table of assignments contains the channels (other than noncommercial educational channels) assigned to the listed communities in the United States, its territories and possessions. Channels designated with an "A" are for Class A FM stations. All other listed channels are for Class B stations in Zones I and I-A and for Class C stations in Zone II. Channels designated with an asterisk are assigned for use by noncommercial educational broadcast stations only.

(b) *Table of FM Assignments.*

ALABAMA

	Channel No.
Abbeville	232A
Albertville	286
Alexander City	291
Andalusia	251
Anniston	263
Arab	224A
Ashland	237A
Athens	282
Atmore	281
Auburn	249A
Bay Minette	288A
Birmingham	229, 233, 243, 258, 284, 295, 299
Brewton	292A
Butler	228A
Carrollton	231
Clanton	249A
Cullman	221A, 266
Decatur	245, 271
Demopolis	292A
Dothan	238, 259
Enterprise	245
Eufaula	224A
Evergreen	228A
Fairhope	221A
Fayette	251
Florence	297
Gadsden	279
Geneva	228A
Guntersville	240A
Hamilton	221A
Huntsville	236, 256
Jackson	285A
Jasper	273

ALABAMA—Continued

	Channel No.
Mobile	225, 235, 241, 248, 260
Monroeville	257A
Montgomery	222, 255, 270, 277
Muscle Shoals	288A
Oneonta	249A
Opelika	265A
Opp	272A
Ozark	280A, 285A
Phenix City	261A
Roanoke	272A
Scottsboro	252A
Selma	261A, 265A
Sheffield	292A
Sylacauga	252A
Talladega	224A
Thomasville	237A
Troy	289
Tuscaloosa	239, 288A
Tuscumbia	262

ALASKA

Anchorage	263, 267, 271, 280A, 288A
College	284
Cordova	265A
Fairbanks	262, 266
Juneau	282, 286
Ketchikan	290, 294
Nome	262
Seward	276A
Sitka	284

ARIZONA

Apache Junction	296A
Bisbee	221A
Casa Grande	288A
Clifton	237A
Cottonwood	240A
Douglas	237A
Flagstaff	225, 230
Glendale	222
Globe	262
Holbrook	221A
Kingman	224A
Lake Havasu City	240A
Mesa	227, 284
Miami	276A
Nogales	252A
Page	228A
Phoenix	233, 238, 245, 254, 268, 273
Prescott	252A
Safford	231, 256
Show Low	228A
Sierra Vista	265A
Sun City	292A
Tempe	250
Tolleson	264
Tucson	225, 229, 235, 241, 258
Wickenburg	288A
Willcox	252A
Winslow	236, 247
Yuma	226, 236

ARKANSAS

	Channel No.
Arkadelphia	265A
Ashtown	280A
Benton	296A
Berryville	237A
Blytheville	241
Brinkley	272A
Camden	246
Clarksville	224A
Conway	262, 286
Corning	228A
Crossett	285A
Dardanelle	272A
DeQueen	224A
De Witt	244A
El Dorado	257A, 276A
Fayetteville	221A, 280A
Forrest City	228A
Fort Smith	229, 256, 260, 265A
Helena	298
Harrison	275
Heber Springs	244A
Hope	285A
Hot Springs	244A, 248, 292A
Jonesboro	270, 300
Lake Village	240A
Little Rock	231, 239, 253, 279
Magnolia	300
Malvern	269A
Mammoth Spring	236
McGehee	272A
Mena	269A
Monticello	228A
Mountain Home	252A
Nashville	288A
Newport	288A
Osceola	251
Paragould	285A
Paris	237A
Pine Bluff	222, 235
Pocahontas	280A
Rogers	232A
Searcy	257A
Siloam Springs	289
Springdale	285A
Texarkana	296A
Walnut Ridge	292A
Wynne	224A

CALIFORNIA

Alameda	224A
Alturas	233
Anaheim	240A
Anderson	232A
Apple Valley	272A
Arcata	228A
Arroyo Grande	237A
Auburn	266
Bakersfield	231, 243, 268, 300
Banning	269A
Barstow	232A
Berkeley	231, 275
Bishop	264
Blythe	262
Brawley	233, 241
Burney	291
Calexico	249A
Camarillo	240A
Carmel	269A
Carlsbad	240A
Cathedral City	276A
Chico	229, 236
Coachella	229
Crescent City	232A

CALIFORNIA—Continued

	Channel No.
Delano	253, 287
Dinuba	255
Durango	263, 267
El Cajon	227
El Centro	253
Escondido	221A
Eureka	222, 242
Fairfield	237A
Fort Bragg	224A, 237A
Fort Collins	227, 300
Fort Morgan	269A
Fowler	244A
Fremont	285A
Fresno	229, 238, 250, 266, 270, 274
Garden Grove	232A
Gilroy	232A
Glendale	270
Glenwood Springs	224A
Hanford	279, 298
Hemet	288A
Hollister	228A
Indio	252A
Inglewood	280A
Jackson	232A
King City	221A
Lancaster	292A
Lemoore	285A
Livermore	269A
Lodi	249A
Lompoc	224A
Long Beach	250, 272A, 288A
Los Altos	249A
Los Angeles	222, 226, 230, 234, 238, 242, 246, 254, 258, 262, 266, 274, 278, 282, 286, 290, 298
Los Banos	240A
Los Gatos	237A
Madera	221A
Mammoth Lakes	292A
Manteca	244A
Mariposa	284
Marysville	260
Merced	268
Modesto	272A, 277, 281
Mojave	249A
Monterey	245
Mt. Shasta	237A
Needles	250
Newport Beach	276A
Oakdale	[1] 236
Oceanside	271
Ojai	288A
Ontario	228A
Oroville	249A
Oxnard	252A, 284
Pacific Grove	285A
Palm Springs	284
Paradise	244A
Pasadena	294
Paso Robles	232A
Porterville	259
Quincy	240A
Red Bluff	240A, 272A

CALIFORNIA—Continued

	Channel No.
Redding	251, 282
Redlands	244A
Redondo Beach	228A
Ridgecrest	224A
Riverside	224A, 248, 256
Roseville	228A
Sacramento	223, 241, 245, 253, 263, 286, 293, 300
Salinas	264, 273, 280A
San Bernardino	236, 260
San Clemente	300
San Diego	231, 235, 243, 247, 251, 264, 268, 275, 279, 287, 293
San Fernando	232A
San Francisco	227, 235, 239, 243, 247, 251, 255, 259, 267 271, 279, 283, 287, 291, 295.
San Jose	222, 253, 262, 293
San Luis Obispo	227, 241
San Mateo	299
San Rafael	265A
Santa Ana	244A, 292A
Santa Barbara	229, 248, 260, 277
Santa Clara	289
Santa Cruz	256
Santa Maria	256, 273
Santa Monica	276A
Santa Paula	244A
Santa Rosa	257A 261A
Seaside	296A
Sierra Madre	296A
Sonora	224A
South Lake Tahoe	261A, 276A
Stockton	257A, 297
Susanville	224A
Taft	280A
Thousand Oaks	224A
Tracy	265A
Truckee	269A
Tulare	235, 294
Turlock	226
Twentynine Palms	239
Ukiah	233, 277
Ventura	236, 264
Victorville	252A
Visalia	225
Walnut Creek	221A
Wasco	249A
Weed	257A
West Covina	252A
Willows	224A
Woodland	273
Yreka	249A
Yuba City	280A

COLORADO

Alamosa	228A
Aspen	249A
Boulder	234, 247
Canon City	280A
Colorado Springs	225, 232A, 236, 243, 270
Cortez	250, 254
Craig	229, 236
Delta	237A
Denver	239, 253, 258, 262, 266, 278, 286, 290, 294
Grand Junction	222, 226
Greeley	222

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[1] Any application must specify maximum power and antenna height, or the equivalent considering terrain.

Colorado—Continued

	Channel No.
Gunnison	252A, 272A
La Junta	221A
Lamar	227, 245
Leadville	228A
Littleton	298
Longmont	282
Loveland	272A
Manitou Springs	274
Monte Vista	244A
Montrose	231, 241
Pueblo	250, 255, 260, 264
Rocky Ford	240A
Salida	221A
Security	288A
Steamboat Springs	244A
Sterling	244A, 288A
Trinidad	224A
Vail	[1] 284
Walsenburg	272A

Connecticut

Bridgeport	260
Brookfield	236
Danbury	252A
Darien	240A
Groton	288A
Hamden	267
Hartford	229, 243, 275, 290, 295
Meridan	239
Middletown	285A
New Britain	263
New Haven	232A, 256
New London	265A
Norwich	249A
Stamford	244A
Waterbury	223, 281
Westport	300
Willimantic	252A

Delaware

Dover	234
Georgetown	228A
Milford	249A
Seaford	252A
Wilmington	229, 258

District of Columbia

Washington	230, 242, 246, 254, 258, 262, 266, 278, 297

Florida

Arcadia	252A
Atlantic Beach	285A
Avon Park	292A
Belle Glade	228A
Blountstown	272A
Boca Raton	260
Bonita Springs	240A
Bradenton	277
Clearwater	239, 250
Clewiston	292A
Cocoa	257A

Florida—Continued

	Channel No.
Cocoa Beach	266, 281
Coral Gables	286
Crestview	285A
Daytona Beach	233, 270
DeLand	290
Delray Beach	274
Defuniak Springs	276A
Ft. Lauderdale	264, 278, 290, 294
Ft. Myers	237A, 245, 270
Ft. Pierce	238, 254
Ft. Walton Beach	257A
Gainesville	279, 288A
Green Cove Springs	224A
Hialeah	221A
Homestead	252A
Immokalee	240A
Jacksonville	236, 241, 245, 256, 275, 297
Jupiter	244A
Key West	223, 238
Lake City	232A
Lakeland	231
Leesburg	294
Live Oak	251
Madison	285A
Marathon	232A
Marianna	265A
Melbourne	272A, 296A
Miami	226, 242, 247, 256, 268, 298
Miami Beach	230, 235
Milton	272A
Mount Dora	299
Naples	228A, 233
New Port Richey	288A
Ocala	229, 272A
Okeechobee	276A
Orlando	222, 243, 262, 286
Palatka	260
Palm Beach	250
Panama City	223, 253, 300
Pensacola	231, 264, 268
Perry	240A
Plantation Key	262
Port St. Joe	228A
Punta Gorda	224A
Quincy	269A
Riviera Beach	232A
St. Augustine	249A
St. Petersburg	258, 268, 297
Sanford	237A
Sarasota	273, 288A, 292A
Sebring	288A
Starke	292A
Stuart	224A
Tallahassee	235, 255, 281
Tampa	227, 235, 264, 284
Titusville	252A
Venice	221A
Vero Beach	228A
West Palm Beach	221A, 283, 300
Winter Haven	248
Winter Park	276A

Georgia

Albany	242, 269A, 283
Americus	232A, 249A
Athens	238, 284
Atlanta	225, 235, 241, 253, 259, 277
Augusta	272A, 276A, 282, 289

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[1] Any application for this channel must specify an effective radiated power of 75 kW. and antenna height of 1,000 feet above average terrain or equivalent.

GEORGIA—Continued

	Channel No.
Bainbridge	247
Blackshear	228A
Brunswick	264, 268
Buford	272A
Camilla	288A
Carrollton	221A
Cartersville	288A
Columbus	275, 285A, 297
Claxton	296A
Cordele	252A
Cornelia	257A
Covington	221A
Dawson	221A
Donalsonville	292A
Douglas	258, 294
Dublin	224A
Eastman	244A
Elberton	221A
Forsyth	261A
Fort Valley	292A
Gainesville	246, 294
Griffin	249A
Hawkinsville	280A
Jesup	288A
La Grange	281
Louisville	221A
Macon	256, 287, 300
Manchester	227
Marietta	268
Milledgeville	272A
Metter	285A
Moultrie	230
Newnan	244A
Ocilla	237A
Perry	265A
Rockmart	296A
Rome	249A, 272A
Sandersville	232A
Savannah	226, 231, 238, 243, 247, 271
Smyrna	231
Sparta	228A
Statesboro	261A
Swainsboro	252A
Thomasville	296A
Thomson	269A
Tifton	262
Toccoa	291
Valdosta	225, 266
Vidalia	249A
Warner Robins	269A
Washington	261A
Waycross	273, 277
Waynesboro	265A

HAWAII

Hilo, Hawaii	246, 250
Kealakekua, Hawaii	221A
Honolulu, Oahu	226, 230, 234, 238, 248
Kailua, Oahu	242
Waipahu, Oahu	222
Lihue, Kauai	224A, 228A
Makawao, Maui	232A
Wailuku, Maui	236

IDAHO

Alameda	285A
Blackfoot	249A
Boise	222, 250

IDAHO—Continued

	Channel No.
Burley	252A
Caldwell	231, 276A
Coeur d'Alene	276A
Emmett	269A
Grangeville	224A
Idaho Falls	241, 256
Jerome	224A
Lewiston	231, 244A
Moscow	280A
Mountain Home	257A
Nampa	235, 245
Orofino	237A
Payette	261A
Pocatello	229, 235
Preston	244A
Rexburg	232A
Rupert	221A
Salmon	224A
Sandpoint	237A
Soda Springs	261A
Sun Valley	228A
Twin Falls	239, 243
Wallace	264, 282
Weiser	265A

ILLINOIS

Alton	262
Anna	224A
Arlington Heights	224A
Aurora	240A, 300
Beardstown	232A
Benton	292A
Bloomington	268
Canton	252A
Carbondale	268
Carmi	247
Carpentersville	280A
Carthage	221A
Centralia	237A
Champaign	233, 248
Charleston	221A
Chicago	226, 230, 234, 238, 242, 246, 250, 254, 258, 262, 266, 278, 282, 298
Clinton	240A
Danville	256, 271
Decatur	236, 275
DeKalb	228
Dixon	269A
Du Quoin	240A
E. St. Louis	266
Effingham	239
Elgin	232A
Elmwood Park	290
Evanston	286
Fairfield	285A
Flora	280A
Freeport	221A, 253
Galesburg	235, 272A
Genesee	285A
Granite City	285A, 293
Harrisburg	260
Havana	257A
Highland Park	276A
Jacksonville	263
Jerseyville	281
Joliet	228A, 244A
Kankakee	260, 272A
Kewanee	221A

Illinois—Continued

	Channel No.
Lansing	292A
LaSalle	257A
Lawrenceville	276A
Lincoln	261A
Litchfield	291
Loves Park	244A
Macomb	261A
Marion	296A
Mattoon	245
Mendota	261A
Moline	245
Monmouth	249A
Monticello	288A
Morris	284
Mount Carmel	235
Mount Vernon	231
Murphysboro	285A
Normal	244A
Oak Park	274
Olney	225
Ottawa	252A
Paris	253
Pekin	237A, 285A
Peoria	227, 289, 295
Peru	[1] 265A
Pittsfield	294A
Plano-Sandwich	296A
Pontiac	276A
Quincy	258, 286
Rantoul	237A
Robinson	269A
Rochelle	272A
Rockford	248, 265A, 285A
Rock Island	255
Salem	261A
Savanna	261
Shelbyville	285A
Skokie	270
South Beloit	276A
Springfield	270, 279, 283
Sterling	232A
Streator	249A
Sullivan	292A
Taylorville	224A
Tuscola	228A
Urbana	280A, 296A
Vandalia	296A
Watseka	231
Waukegan	272A, 294
West Frankfort	292A
Woodstock	288A

Indiana

Anderson	250
Angola	261A
Auburn	288A
Aurora	257A
Bedford	288A
Bloomington	222, 244A, *279
Bluffton	261A
Boonville	296A
Brazil	232A, 249A
Columbia City	292A
Columbus	268
Connersville	262
Crawfordsville	292A
Crown Point	280A
Danville	296A

Indiana—Continued

	Channel No.
Decatur	224A
Elkhart	264, 284
Elwood	269A
Evansville	281, 287
Fort Wayne	236, 247, 269A, 280A
Fowler	240A
Frankfort	259
Franklin	240A
French Lick	261A
Greenfield	258
Greensburg	297
Hammond	222
Huntington	276A
Indianapolis	226, 234, 238, 277, 283, 289, 300
Jasper	284
Jeffersonville	239
Kendallville	227
Knox	257A
Kokomo	228A, 263
Lafayette	224A, 244A, 287
Laporte	244A
Lebanon	265A
Linton	228A
Logansport	237A, 272A
Lovell	296A
Madison	244A
Marion	285A, 295
Martinsville	272A
Michigan City	240A
Muncie	281
New Castle	273
North Vernon	291
Paoli	237A
Peru	252A
Plainfield	252A
Plymouth	232A
Portland	265A
Princeton	251
Rensselaer	249A
Richmond	241, 267
Rochester	221A
Rockville	285A
Rushville	232A
Salem	255
Scottsburg	265A
Seymour	229
Shelbyville	246
South Bend	225, 268, 276A, 280A
Sullivan	237A
Terre Haute	260, 264, 274, 298
Valparaiso	288A
Vevay	240A
Vincennes	244A
Wabash	240A
Warsaw	297
Washington	293
West Frankfort	249A
West Terre Haute	288A
Winchester	252A

Iowa

Algona	224A
Ames	281, 296A
Anamosa	232A
Atlantic	279
Boone	252A, 257A
Burlington	297
Carroll	224A, 229

Iowa—Continued

	Channel No.
Cedar Rapids	243, 251, 275, 283
Centerville	254
Charles City	285A
Cherokee	272A
Clarinda	292A
Clarion	245
Clinton	241, 249A
Creston	269A
Davenport	279, 293
Decorah	280A
Denison	296A
Des Moines	227, 235, 247, 262, 273
Dubuque	225, 272A, 287
Estherville	240A
Forest City	272A
Fort Dodge	221A, 233
Fort Madison	269A
Grundy Center	249A
Humboldt	249A
Independence	237A
Iowa City	228A, 264
Iowa Falls	237A
Keokuk	237A
Knoxville	221A
Le Mars	258
Maquoketa	237A
Marshalltown	266
Mason City	252A, 291
Mount Pleasant	288A
Muscatine	259
Newton	240A
Oelwein	222
Onawa	292A
Oskaloosa	285A
Ottumwa	223, 249A
Perry	285A
Sheldon	288A
Sioux City	238, 250, 277
Sioux Center	232A
Spencer	221A, 299
Storm Lake	268
Waterloo	270, 289, 300
Waverly	257A
Webster City	240A

Kansas

Arkansas City	293
Chanute	288A
Coffeyville	232A
Colby	262
Concordia	237A
Dodge City	230, 238
El Dorado	257A
Emporia	285A
Fort Scott	280A
Garden City	247
Goodland	273
Great Bend	282
Hays	277
Hutchinson	271, 275
Independence	269A
Iola	257A
Junction City	233, 252A
Kansas City	231, 251
Larned	244A
Lawrence	290
Leavenworth	255
Liberal	257A, 288A

Kansas—Continued

	Channel No.
Lyons	288A
Manhattan	269A
Marysville	276A
McPherson	244A
Newton	222
Ottawa	239
Parsons	228A
Phillipsburg	221A
Pittsburg	245
Pratt	226
Russell	240A
Salina	229, 260
Scott City	233
Topeka	247, 262, 295, 299
Wichita	236, 250, 267, 279, 297
Winfield	288A

Kentucky

Albany	292A
Ashland	229, 272A
Barbourville	228A
Bardstown	244A
Beattyville	272A
Benton	272A
Bowling Green	244A, 252A
Brandenburg	228A
Cadiz	292A
Campbellsville	280A
Carrollton	261A
Catlettsburg	224A
Central City	270
Columbia	228A
Corbin	257A, 296A
Cynthiana	272A
Danville	296A
Elizabethtown	261A
Erlanger	265A
Falmouth	237A
Fort Knox	288A
Frankfort	285A
Fulton	257A
Georgetown	276A
Glasgow	236, 288A
Greenville	292A
Hardinsburg	232A
Harrodsburg	257A
Hartford	292A
Hazard	266
Henderson	258, 276A
Hodgenville	292A
Hopkinsville	254, 262
Jackson	249A
Jamestown	276A
Jenkins	276A
Lancaster	292A
Lawrenceburg	265A
Leitchfield	285A
Lexington	225, 233, 251
Liberty	288A
London	280A
Louisville	248, 259, 272A, 276A, 280A, 295
Madisonville	230
Manchester	276A
Mayfield	234
Maysville	240A
Middlesboro	224A
Monticello	269A
Morehead	221A

KENTUCKY—Continued

	Channel No.
Morganfield	237A
Mount Sterling	288A
Munfordville	272A
Murray	279
Neon	296A
Owensboro	223, 241
Paducah	227, 245
Paintsville	255
Paris	244A
Pikeville	221A
Pineville	292A
Prestonsburg	238, 288A
Princeton	285A
Richmond	269A
Russellville	266
Somerset	244A
Stanford	240A
Tompkinsville	221A
Vanceburg	285A
Whitesburg	280A
Winchester	261A

LOUISIANA

Abbeville	285A
Alexandria	245, 262
Bastrop	232A
Baton Rouge	251, 264, 268, 273
Bogalusa	300
Crowley	275
DeRidder	269A
Donaldsonville	285A
Eunice	288A
Ferriday	228A
Franklin	237A
Golden Meadow	232A
Hammond	277, 296A
Houma	281, 296A
Jennings	224A
Jonesboro	285A
Lafayette	233, 260
Lake Charles	241, 258, 279
Leesville	288A
Mansfield	224A
Marksville	249A
Minden	237A
Monroe	270, 281, 291
Morgan City	244A
Natchitoches	249A
New Iberia	256
New Orleans	222, 227, 239, 246, 253, 258, 266, 270
Oak Grove	244A
Oakdale	285A
Opelousas	296A
Port Sulphur	294
Ruston	296A
Shreveport	229, 233, 243, 261A, 266
Slidell	287
Sulphur	265A
Thibodaux	292A
Ville Platte	228A
West Monroe	252A
Winnfield	221A
Winnsboro	240A

MAINE

Auburn	261A
Augusta	267, 282

MAINE—Continued

	Channel No.
Bangor	225, 246
Bath	237A
Biddeford	232A
Brunswick	255
Calais	224A
Caribou	249A
Dover-Foxcroft	276A
Ellsworth	232A, 239
Farmington	257A
Houlton	261A
Lewiston	230, 298
Lincoln	257A
Machias	237A
Madawaska	272A
Portland	250, 270, 275
Presque Isle	237A, 241, 245
Rockland	228A
Rumford	242
Saco	292A
Sanford	244A
Skowhegan	296A
South Paris	288A
Waterville	252A
Westbrook	285A

MARYLAND

Annapolis	256, 300
Baltimore	222, 226, 236, 250, 270, 274, 282, 293
Bethesda	234, 272A
Braddock Heights	280A
Cambridge	292A
Catonsville	289
Cumberland	275, 291
Easton	244A
Frederick	260
Frostburg	287
Glen Burnie	240A
Hagerstown	284, 295
Halfway	244A
Havre de Grace	279
Leonardtown	249A
Oakland	238
Oakland (western Md.)	221A
Ocean City	[1]260, 284
Pocomoke City	221A
Prince Frederick	224A
Salisbury	232A
Waldorf	281
Westminster	264
Williamsport	240A

MASSACHUSETTS

Barnstable	260
Boston	233, 245, 253, 264, 277, 281, 294
Brockton	249A
Brookline	225
Cambridge	237A
Falmouth	240A, 270
Fitchburg	283
Framingham	289
Gloucester	285A
Greenfield	252A
Haverhill	228

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[1] Any application for this channel must specify an effective radiated power of at least 25 kilowatts.

MASSACHUSETTS—Continued

	Channel No.
Hyannis	291
Lawrence	229
Lowell	258
Lynn	269A
Medford	300
Nantucket	228A
New Bedford	247, 251
North Adams	261A
North Attleboro	227
Northampton	257A
Pittsfield	269A, 288A
Plymouth	256
Southbridge	261A
Springfield	226, 234, 271
Waltham	273
West Yarmouth	235
Worcester	241, 297

MICHIGAN

Adrian	280A
Albion	244A, 285A
Alma	285A
Alpena	228A, 299
Ann Arbor	296A
Bad Axe	221A
Battle Creek	237A, 277
Bay City	241, 273
Benton Harbor	260
Big Rapids	265A
Birmingham	234
Cadillac	225, 244A
Charlotte	224A
Cheboygan	286
Clare	237A
Coldwater	253
Dearborn	262
Detroit	226, 238, 242, 246, 250, 254, 258, 266, 270, 278, 282, 286, 290, 294, 298
Dowagiac	249A
East Lansing	235, 256
Escanaba	246, 284
Flint	236, 288A, 300
Fremont	261A
Gaylord	237A, 294
Grand Haven	221A
Grand Rapids	229, 239, 245, 250, 267, 275, 281, 289
Grayling	261A
Greenville	297
Hancock	228A
Hastings	261A
Hillsdale	221A
Holland	233, 241
Hougton	249A
Hougton Lake	253
Ishpeming	222, 296A
Iron Mountain	280A
Iron River	244A
Ironwood	259, 295
Jackson	231, 291
Kalamazoo	271, 293
Lapeer	276A
Lansing	248, 264, 269A
Lincoln Park	222
Ludington	292A
Mackinaw City	232A
Manistee	249A

MICHIGAN—Continued

	Channel No.
Marquette	239, 261A
Menominee	292A
Midland	259
Mt. Clemens	274
Mt. Pleasant	233
Munising	252A
Muskegon	283, 295
Muskegon Heights	269A
Niles	237A
Owasso	280A
Petoskey	244A, 255
Port Huron	296A
Rogers City	249A
Saginaw	251, 292A, 296A
Saline	275
St. Helen	288A
St. Ignace	272A
St. Johns	221A
St. Joseph	296A
Sandusky	249A
Sault Ste. Marie	224A
South Haven	252A
Sturgis	257A
Tawas City	269A
Three Rivers	240A
Traverse City	221A, 270, 278
Whitehall	237A
Zeeland	257A

MINNESOTA

Aitkin	232A
Albert Lea	237A
Alexandria	224A, 264
Anoka	300
Austin	260
Bemidji	266
Benson	228A
Blue Earth	265A
Brainerd	239
Breckenridge	285A
Cambridge	288A
Cloquet	265A
Crookston	241, 246
Detroit Lakes	237A
Duluth	225, 235, 255, 273, 277, 286
East Grand Forks	280A
Ely	221A
Eveleth	261A
Fairmont	293
Faribault	240A
Fergus Falls	243, 277
Fosston	296A
Golden Valley	223
Grand Rapids	244A
Hibbing	292A
Hutchinson	296A
International Falls	232A
Litchfield	237A
Little Falls	221A
Luverne	265A
Mankato	256, 278
Marshall	261A
Minneapolis	229, 246, 253, 258, 262, 267, 275
Montevideo	288A
Moorhead	254, 260
Morris	298
New Ulm	226
Ortonville	292A

Minnesota—Continued

	Channel No.
Owatonna	285A
Park Rapids	279
Pipestone	254
Preston	276A
Princeton	292A
Red Wing	288A
Redwood Falls	249A
Rochester	244A, 248, 269A, 295
St. Cloud	269A, 284
St. Louis Park	281
St. Paul	233, 237A, 271
St. Peter	288A
Thief River Falls	257A
Virginia	296A
Wadena	290
Waseca	221A
Willmar	273
Windom	285A
Winona	237A
Worthington	236

Mississippi

Aberdeen	288A
Amory	237A
Biloxi	299
Booneville	257A
Brookhaven	221A
Calhoun City	272A
Canton	269A
Carthage	252A
Centerville	285A
Charleston	272A
Clarksdale	232A
Cleveland	224A, 280A
Clinton	228A
Columbia	244A
Columbus	276A
Corinth	232A, 237A
Drew	237A
Eupora	269A
Forest	223
Fulton	269A
Greenville	250, 264
Greenwood	256
Grenada	261A
Gulfport	272A, 296A
Hattiesburg	221A, 279, 283
Hazelhurst	265A
Holly Springs	224A
Houston	227
Indianaola	288A
Iuka	285A
Jackson	234, 238, 242, 259, 275
Kosciusko	286
Laurel	262, 272A
Leland	232A
Lexington	292A
Louisville	296A
Macon	280A
Magee	298
McComb	231, 289
Meridian	246, 267
Moss Point	285A
Natchez	236
New Albany	278, 292A
Ocean Springs	276A
Oxford	237A, 248

Mississippi—Continued

	Channel No.
Pascagoula	256, 292A
Philadelphia	272A
Picayune	292A
Pontotoc	244A
Prentiss	252A
Sardis	240A
Senatobia	237A
Starkville	292A
Tupelo	253
Tylertown	249A
Vicksburg	254, 294
Waynesboro	288A
West Point	265A
Winona	244A
Yazoo City	221A

Missouri

Aurora	261A
Bolivar	292A
Boonville	257A
Branson	292A
Brookfield	249A
Cape Girardeau	264, 275
Canton	272A
Carrollton	266
Carthage	285A
Caruthersville	276A
Chillicothe	280A
Clayton	256
Clinton	237A
Columbia	244A, 252A
Crestwood	234
Dexter	272A
Doniphan	249A
Eldorado Springs	296A
Fulton	249A
Hannibal	225
Harrisonville	264
Houston	257A
Jefferson City	261A, 295
Joplin	223, 273
Kansas City	227, 235, 243, 259, 271, 277, 282
Kennett	255
Kirksville	228A, 233
Lebanon	279
Lexington	292A
Marshall	275
Maryville	237A
Mexico	239
Moberly	284
Monett	240A
Mountain Grove	224A
Osage Beach	228A
Poplar Bluff	233, 297
Portageville	292A
Potosi	261A
Rolla	232A, 287
Ste. Genevieve	289
St. Charles	246
St. Joseph	286
St. Louis	222, 229, 242, 251, 273, 277, 299
Salem	240A
Sedalia	221A
Sikeston	249A
Springfield	234, 247, 254, 268
Sullivan	265A
Thayer	244A
Trenton	221A

MISSOURI—Continued

	Channel No.
Union	269A
Waynesville	249A, 272A
West Plains	230, 272A
Willow Springs	261A

MONTANA

Anaconda	249A
Baker	265A
Belgrade	244A
Billings	227, 246, 253
Bozeman	229
Butte	231, 233
Dillon	252A
Glasgow	228A
Glendive	243
Great Falls	225, 233, 255, 292A
Hamilton	240A
Hardin	237A
Havre	223, 236
Helena	221A, 276A
Kalispell	246, 253
Lewistown	240A
Libby	269A
Livingston	249A
Miles City	224A
Missoula	227, 235, 261A
Plentywood	261A
Red Lodge	257A
Scobey	239
Shelby	242, 250
Sidney	226, 236
Wolf Point	224A

NEBRASKA

Alliance	221A
Auburn	288A
Aurora	276A
Beatrice	225
Broken Bow	252A
Chadron	228A, 234
Columbus	228A, 266
Fairbury	257A
Fremont	288A
Grand Island	239, 243
Hastings	228A
Holdrege	249A
Kearney	255, 272A
Kimbell	261A
Lexington	226
Lincoln	237A, 270, 274, 292A, 297
McCook	240A, 276A
Nebraska City	249A
Norfolk	294
North Platte	235, 246
Ogallala	228A
Omaha	222, 231, 241, 253, 260, 264, 283
O'Neill	224A
Ord	280A
Scottsbluff	225, 231
Seward	[1] 245
Sidney	237A
Superior	280A

NEBRASKA—Continued

	Channel No.
Terrytown	265A
Valentine	241
Wayne	285A
York	285A

NEVADA

Carson City	234, 247
Elko	228A, 237A
Ely	224A
Fallon	257A
Henderson	231, 238
Las Vegas	222, 226, 246, 253, 270
Reno	238, 283, 289, 295
Sparks	252A
Tonapah	224A
Winnemucca	224A

NEW HAMPSHIRE

Berlin	279
Blairstown Township	292A
Claremont	291
Concord	272A
Conway	228A
Dover	248
Exeter	296A
Hanover	257A
Keene	279
Laconia	252A
Manchester	239, 266
Mt. Washington	235
Nashua	292A
Newport	285A
Peterborough	221A
Portsmouth	262
Rochester	280A

NEW JERSEY

Asbury Park	232A
Atlantic City	236, 245, 279
Bridgeton	299
Camden	295
Canton	269A
Cape May	272A
Dover	288A
Eatontown	292A
Egg Harbor City	285A
Franklin	272A
Long Branch	296A
Millville	247
Newark	234, 262, 290
New Brunswick	252A
Newton	279
Ocean City	292A
Paterson	226
Pleasantville	257A
Point Pleasant	240A
Princeton	277
Toms River	224A
Trenton	233, 248, 268
Vineland	221A
Wildwood	264
Zarephath	256

NEW MEXICO

Alamagordo	232A, 288A
Albuquerque	222, 227, 231, 242, 258, 262, 300
Artesia	225
Aztec	235

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[1] Any application for this channel must specify an effective radiated power of 100 kW and antenna height of 650 feet above average terrain or equivalent.

New Mexico—Continued

	Channel No.
Belen	249A
Carlsbad	221A
Clayton	228A
Clovis	256, 260
Deming	232A
Espanola	272A
Farmington	225, 245
Gallup	229, 233
Grants	237A
Hobbs	231, 239
Las Cruces	280A
Las Vegas	265A
Lordsburg	249A
Los Alamos	253
Lovington	269A
Portales	237A
Raton	232A
Roswell	235, 246
Ruidoso	228A
Sante Fe	238, 247
Santa Rosa	240A
Silver City	224A
Socorro	224A
Taos	257A
Truth or Consequences	244A
Tucumcari	224A

New York

Albany	238, 265A, 276A, 280A, 293, 299
Amsterdam	249A, 285A
Auburn	295
Babylon	232A, 272A
Baldwinsville	221A
Ballston Spa	244A
Bath	252A
Binghamton	251, 256
Buffalo	225, 233, 241, 245, 258, 273, 277, 281, 293
Canandaigua	272A
Cazenovia	237A
Cherry Valley (Otsego Co.)	270
Corning	291
Cortland	260
Depew	229
De Ruyter	286
Dundee	240A
Ellenville	257A
Elmira	224A, 232A
Endicott	288A
Fulton	284
Garden City	224A
Geneva	269A
Glens Falls	240A, 296A
Gouverneur	224A
Hempstead	252A
Herkimer	224A
Hornell	287
Horseheads	265A
Hudson	228A
Ithaca	228A, 247, 279
Jamestown	227, 269A
Kingston	232A, 249A
Lake Success	278
Liberty	240A
Little Falls	288A
Middletown	224A
Monticello	252A
Montour Falls	285A

New York—Continued

	Channel No.
Mt. Kisco	292A, 296A
Newburgh	276A
New Rochelle	228A
New York	222, 230, 238, 242, 246, 250, 254, 258, 266, 270, 274, 282, 286, 294, 298
Niagara Falls	253
Norwich	230
Ogdensburg	244A
Olean	239, 265A
Oneida	292A
Oneonta	276A, 280A
Oswego	288A
Owego	269A
Patchogue	248, 291
Peekskill	264
Plattsburg	260
Port Jervis	244A
Potsdam	257A
Poughkeepsie	268, 284
Riverhead	280A
Rochester	223, 243, 250, 255, 263, 267, 280A
Rome	240A
Sag Harbor	221A
Salamanca	261A
Saranac Lake	237A
Saratoga Springs	272A
Schenectady	258
Seneca Falls	257A
South Bristol Twsp. (Ontario Co.)	236
Southampton	237A
Syracuse	226, 233, 265A, 275, 300
Troy	222
Utica	245, 254, 282, 297
Walton	221A
Watertown	248
Weathersfield Twsp. (Wyoming Co.)	299
Wellsville	257A
White Plains	280A

North Carolina

Ahoskie	257A
Albermarle	265A
Asheboro	222
Asheville	260
Black Mountain	295
Burlington	230, 266
Charlotte	236, 279, 284, 300
Clinton	296A
Concord	250
Dunn	276A
Durham	286, 296A
Eden	233
Edenton	261A
Elizabeth City	229
Elkin	265A
Fairmont	265A
Farmville	232A
Fayetteville	251
Forest City	227
Franklin	244A
Gastonia	270
Goldsboro	245, 272A
Greensboro	246, 254
Greenville	299
Havelock	285A
Henderson	223
Hendersonville	273
Hickory	239, 275

NORTH CAROLINA—Continued

	Channel No.
High Point	238, 258, 262
Jacksonville	221A, 288A
Kannapolis	259
Kinston	236, 249A
Laurinburg	243
Lexington	231
Lumberton	239, 272A
Morehead City-Beaufort	240A, 270
Morganton	221A
Murfreesboro	252A
Murphy	280A
New Bern	293
N. Wilkesboro	247
Plymouth	240A
Raleigh	234, 241, 268
Reidsville	271
Roanoke Rapids	272A
Rocky Mount	221A, 264
Roxboro	244A
Salisbury	293
Sanford	288A
Shelby	241
Southern Pines	296A
Statesville	245, 289
Tabor City	285A
Tarboro	282
Thomasville	252A
Wallace	232A
Wanchese	237A
Washington	227
Whiteville	256
Williamston	279
Wilmington	247, 260, 265A, 274
Wilson	291
Winston-Salem	226, 281, 298

NORTH DAKOTA

Bismarck	225, 233
Bottineau	270
Carrington	249A
Devils Lake	244A
Dickinson	221A
Fargo	229, 250
Grafton	265A
Grand Forks	225, 234
Hettinger	228A
Jamestown	227, 238
Mandan	285A
Minot	229, 246
Oakes	252A
Rugby	237A
Tioga	280A
Valley City	265A
Williston	241, 253

OHIO

Akron	243, 248
Alliance	223
Ashland	267
Ashtabula	246
Athens	252A, 288A
Barberton	235
Bellefontaine	[1] 252A
Bellevue	221A
Bellaire	263
Bowling Green	228A
Bryan	265A

OHIO—Continued

	Channel No.
Bucyrus	224A
Cambridge	244A
Canton	231, 251, 295
Celina	232A, 244A
Chillicothe	227, 232A
Cincinnati	223, 227, 231, 253, 270, 274, 286
Circleville	296A
Cleveland	226, 238, 253, 258, 264, 271, 277, 281, 289, 293, 300
Cleveland Heights	222
Columbus	222, 234, 242, 246, 250, 259, 285A
Conneaut	288A
Coshocton	257A
Dayton	256, 284, 299
Defiance	240A
Delphos	296A
Dover	269A
East Liverpool	282
Eaton	225
Elyria	297
Findlay	263
Fostoria	244A
Fremont	256
Galion	272A
Gallipolis	268
Georgetown	249A
Greenville	293
Hamilton	235, 243, 278
Hillsboro	294
Ironton	296A
Jackson	249A
Kent	261A
Kenton	237A
Kettering	260
Lancaster	238
Lima	249A, 271, 285A
London	292A
Lorain	285A
Mansfield	287, 291
Marietta	232A
Marion	295
Miamisburg	229
Middleport	221A
Middletown	290
Milford	296A
Mt. Vernon	229
Napoleon	276A
Newark	262, 269A
New Philadelphia	240A
Norwalk	237A
Oxford	249A
Piqua	239
Port Clinton	233
Portsmouth	257A, 281
Salem	286
Sandusky	274
Sidney	288A
Springfield	264, 275
Steubenville	278
Tiffin	279
Toledo	223, 252A, 260, 268, 272A, 284, 288A
Upper Sandusky	240A
Urbana	269A
Van Wert	255
Wapakoneta	221A
Wash. Ct. House	288A
Waverly	265A
Wellston	244A

OHIO—Continued

	Channel No.
Westerville	280A
Wilmington	272A
Wooster	283
Xenia	237A, 280
Youngstown	227, 255, 266
Zanesville	278

OKLAHOMA

Ada	227
Altus	228A
Alva	259, 284
Ardmore	221A, 239
Bartlesville	261A
Bethany	285A
Bristow	265A
Broken Arrow	221A
Chickasha	288A
Clinton	237A, 295
Duncan	272A
Durant	296A
Edmond	249A
Elk City	232A
Enid	245
Eufaula	272A
Frederick	240A
Guymon	224A
Henryetta	258
Hobart	257A
Hugo	237A
Idabel	244A
Lawton	251, 268
Madill	285A
McAlester	267
Miami	265A
Muskogee	295
Norman	292A
Oklahoma City	223, 234, 241, 255, 263, 270, 274, 281, 299
Okmulgee	285A
Ponca City	257A, 265A
Poteau	252A, 297
Pryor	283
Sallisaw	240A
Seminole	288A
Stillwater	230, 288A
Sulphur	265A
Tahlequah	269A
Tulsa	225, 238, 243, 248, 253, 277
Woodward	228A

OREGON

Albany	300
Ashland	269A
Astoria	225
Baker	237A
Bend	231, 264
Brookings	237A
Burns	224A
Coos Bay	252A, 288A
Coquille	272A
Corvallis	268, 291
Cottage Grove	237A
Enterprise	244A
Eugene	233, 241, 250, 256
Gold Beach	224A
Grant's Pass	245, 260
Hermiston	257A
Hood River	288A

OREGON—Continued

	Channel No.
Klamath Falls	223, 253
La Grande	252A
Lakeview	228A
Lebanon	279
Medford	229, 237A
Newport	274
North Bend	265A
Oceanlake	244A
Ontario	226, 241
Oregon City	294
Pendleton	278, 299
Portland	222, 229, 238, 246, 253, 258, 262, 266, 270, 277
Prineville	237A
Redmond	224A
Roseburg	276A
Salem	286
Springfield	226
The Dalles	283
Tillamook	281
Toledo	296A

PENNSYLVANIA

Allentown	264, 281
Altoona	251, 261A
Beaver Falls	294
Bedford	265A
Bethlehem	236
Bloomsburg	293
Boyertown	298
Braddock	245
Bradford	280A
Butler	249A
Carbondale	232A
Carlisle	228A, 272A
Central City	269A
Chambersburg	236
Charleroi	257A
Clearfield	228A
Columbia	224A
Connellsville	280A
Coudersport	244A
Danville	244A
Dubois	271, 297
Easton	241, 260
Ebensburg	256
Elizabethtown	294
Ellwood City	221A
Emporium	224A
Ephrata	286
Erie	260, 272A, 279, 292A
Franklin	257A
Gettysburg	299
Greensburg	296A
Greenville	296A
Grove City	236
Harrisburg	235, 247, 257A, 281
Hazelton	250
Huntingdon	292A
Indiana	276A
Jenkintown	280A
Johnstown	221A, 238, 243
Kane	276A
Lancaster	233, 245, 267
Lebanon	261A
Lewistown	240A
Linesville	296A
Lock Haven	221A

PENNSYLVANIA—Continued

	Channel No.
Martinsburg	224A
Meadville	262
Media	262
Mifflinburg	252A
Milton	265A
Montrose	243
Nanticoke	221A
New Kensington-Tarentum	264
North East	265A
Oil City	253
Palmyra	221A
Philadelphia	223, 227, 231, 239, 243, 251, 255, 266, 271, 275, 283, 287, 291
Philipsburg	280A
Pittsburgh	225, 229, 233, 241, 259, 268, 278, 284, 290, 300
Pottsville	270
Punxsutawney	288A
Reading	273
Red Lion	241
St. Marys	232A
Sayre	272A
Scranton	267, 285A, 296A
Shamokin	237A
Sharon	275, 280A
Shenandoah	288A
Shippensburg	232A
Somerset	249A
South Williamsport	257A
State College	244A, 276A
Stroudsburg	228A
Sunbury	231
Towanda	237A
Tyrone	266
Uniontown	257A
Warren	222
Washington	237A
Waynesboro	268
Wellsboro	249A
White Haven	276A
Wilkes-Barre	225, 253
Williamsport	274, 286
York	253, 277, 289

RHODE ISLAND

Newport	296A
Providence	222, 231, 238, 268, 286
Westerly	279
Woonsocket	292A

SOUTH CAROLINA

Aiken	240A, 257A
Anderson	266, 297
Bamberg	224A
Barnwell	269A
Batesburg	221A
Beaufort	254
Camden	232A
Cayce	244A
Charleston	236, 245, 278
Chester	257A
Columbia	228A, 250, 261A, 284
Conway	281
Dillon	225
Easley	280A
Florence	276A, 288A
Gaffney	287
Georgetown	249A, 292A

SOUTH CAROLINA—Continued

	Channel No.
Greenville	223, 229, 233
Greenwood	244A
Hampton	276A
Hilton Head Island	292A
Kingstree	261A
Lancaster	296A
Laurens	263
Manning	221A
Marion	232A
Moncks Corner	288A
Mullins	265A, 296A
Myrtle Beach	221A, 269A
North Charleston	273
North Myrtle Beach	288A
Orangeburg	280A, 294
St. George	240A
Seneca	251
Spartanburg	255
Summerville	228A
Sumter	267
Walterboro	265A

SOUTH DAKOTA

Aberdeen	231, 235
Belle Fourche	240A
Brookings	232A
Deadwood	226, 236
Hot Springs	244A
Huron	221A
Madison	276A
Mitchell	265A
Mobridge	258
Pierre	224A, 237A
Rapid City	230, 250
Sioux Falls	223, 228A, 243, 247
Vermillion	272A
Watertown	241, 245
Winner	229
Yankton	262, 281

TENNESSEE

Athens	252A
Bristol	245
Carthage	272A
Chattanooga	222, 243, 288A, 293
Clarksville	300
Cleveland	264
Clinton	285A
Columbia	269A
Cookeville	232A, 252A
Covington	228A
Crossville	257A
Dayton	285A
Dickson	272A
Donelson	221A
Dyersburg	261A
Elizabethton	257A
Erwin	280A
Fayetteville	288A
Franklin	261A
Gallatin	283
Greeneville	235
Harriman	224A
Humboldt	272A
Jackson	222, 281
Jamestown	280A
Johnson City	268
Kingsport	253, 285A

TENNESSEE—Continued

	Channel No.
Knoxville	248, 278, 299
Lafayette	257A
LaFollette	288A
Lawrenceburg	240A
Lebanon	297
Lenoir City	228A
Lewisburg	232A
Lexington	257A
Livingston	240A
Lobelville	232A
Manchester	259
Martin	269A
McKenzie	295
McMinnville	280A
Memphis	246, 259, 266, 274, 283, 290
Morristown	240A
Murfreesboro	242
Nashville	225, 238, 250, 277, 290
Oak Ridge	232A, 262C
Paris	288A
Pulaski	252A
Red Bank City	232A
Ripley	237A
Savannah	269A
Sevierville	271
Shelbyville	275
Smithville	269A
Soddy-Daisy	272A
Sparta	288A
Springfield	232A
Sweetwater	237A
Tullahoma	227
Waverly	285A

TEXAS

	Channel No.
Abilene	257A, 264, 286, 300
Alice	272A
Alpine	224A
Alvin	271
Amarillo	226, 231, 250, 254, 270
Andrews	288A
Arlington	235
Atlanta	257A
Austin	229, 238, 252A, 264
Ballinger	276A
Bay City	245
Beaumont	231, 236, 248, 299
Beeville	285A
Belton	292A
Big Lake	252A
Big Spring	237A
Bonham	252A
Borger	282
Brady	237A
Breckenridge	228A
Brenham	292A
Brownfield	292A
Brownsville	226, 262
Brownwood	257A, 268, 281
Bryan	252A
Burnet	296A
Cameron	269A
Canyon	296A
Carrizo Springs	228A
Childress	244A
Cleveland	295
Coleman	296A

TEXAS—Continued

	Channel No.
College Station	221A
Colorado City	292A
Columbus	252A
Comanche	232A
Corpus Christi	230, 238, 243, 256, 260
Corsicana	300
Crane	265A
Crockett	224A
Cuero	249A
Dalhart	240A
Dallas	223, 250, 254, 262, 266, 275, 279, 283, 287
Del Rio	232A
Denison	269A
Denton	291
Diboll	238
Dumas	237A
Eagle Pass	224A
Eastland	244A
Edinburg	273, 281
El Paso	227, 234, 242, 248, 253, 260, 264, 271, 275
Falfurrias	292A
Farwell	252A
Floydada	237A
Fort Stockton	232A
Fort Worth	230, 242, 246, 258, 271, 298
Fredericksburg	266
Gainesville	233
Galveston	293
Georgetown	244A
Gonzales	292A
Greenville	228A
Hamilton	221A
Harlingen	233, 241
Henderson	261A
Hereford	292A
Hillsboro	273
Houston	229, 233, 239, 243, 250, 256, 262, 266, 275, 281, 289
Huntsville	269A
Jacksonville	293
Jasper	272A
Junction	228A
Kenedy-Karnes	232A
Kermit	292A
Kerrville	232A
Kilgore	240A
Killeen	227
Kingsville	249A
La Grange	285A
Lake Jackson	297
Lamesa	262, 284
Lampasas	257A
Laredo	224A, 264, 286
Levelland	288A
Livingston	221A
Longview	289
Lubbock	229, 233, 242, 258, 266, 273
Lufkin	257A, 286
Marlin	244A
Marshall	280A
McAllen	245, 253
McCamey	237A
McKinney	237A
Memphis	279
Mercedes	296A
Merkel	272A

TEXAS—Continued

	Channel No.
Mexia	252A
Midland	222, 227, 271
Mineral Wells	240A
Mission	221A
Monahans	260, 277
Mt. Pleasant	264
Muleshoe	276A
Nacogdoches	221A, 277
New Boston	240A
New Braunfels	221A
Odessa	245, 250, 256
Orange	283, 291
Palestine	232A
Pampa	262
Paris	257A
Pasadena	223
Pecos	252A
Perryton	240A
Pharr	285A
Plainview	247
Pleasanton	252A
Port Arthur	227, 253
Port Lavaca	240A
Quanah	265A
Ralls	252A
Raymondville	269A
Refugio	292A
Rosenberg	285A
Rusk	249A
San Angelo	225, 230, 234, 248
San Antonio	225, 241, 247, 258, 262, 270, 274, 283, 298
San Marcos	279
San Saba	244A
Seguin	287
Seminole	280A
Seymour	232A
Shamrock	224A
Sherman	244A
Silsbee	269A
Sinton	267, 277
Slaton	224A
Snyder	269A
Sonora	221A
Spearman	252A
Stamford	221A
Stephensville	252A
Sweetwater	244A
Taylor	221A
Temple	285A
Terrell	296A
Terrell Hills	292A
Texarkana	251, 273
Tulia	285A
Tyler	226, 257A, 268
Uvalde	237A
Vernon	272A
Victoria	221A, 236, 254
Waco	238, 248, 260, *296A
Weslaco	258, 290
Wichita Falls	225, 236, 260, 277

UTAH

Blanding	221A
Bountiful	288A
Brigham City	296A
Cedar City	223, 235
Logan	225, 233

UTAH—Continued

	Channel No.
Moab	244A
Ogden	238, 250, 266, 270
Orem	296A
Price	252A
Provo	235, 241
Richfield	229
St. George	228A
Salt Lake City	227, 231, 246, 254, 262, 278, 282
Spanish Fork	292A
Tooele	221A
Vernal	224A

VERMONT

Barre	296A
Bennington	232A
Burlington	225, 255
Middlebury	265A
Montpelier	244A, 276A
Newport	300
Rutland	[1] 246, [1] 251
St. Albans	272A
Springfield	228A
Waterbury	287
White River Junction	237A

VIRGINIA

Abingdon	224A
Altavista	288A
Arlington	286
Ashland	261A
Big Stone Gap	228A
Blacksburg	285A
Blackstone	228A
Charlottesville	237A, 248
Chesapeake-Portsmouth-Virginia Beach	235
City of Nansemond	295
Clarksville	252A
Clifton Forge	280A
Covington	265A
Crewe	284
Culpeper	276A
Danville	277
Exmore	298
Farmville	239
Fredericksburg	227, 268
Front Royal	275A
Galax	251
Gretna	292A
Grundy	249A
Hampton	267
Harrisonburg	264, 282
Hopewell	221A
Lawrenceville	288A
Luray	280A, 292A
Lynchburg	252A, 261A, 269A
Manassas	294
Marion	230, 272A
Martinsville	242
Norfolk-Newport News	225, 239, 247, 254, 259, 263, 275, 283, 287
Norton	292A
Orange	244A

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[1] Channels 246 and 251 at Rutland, Vt., are regarded as Class B assignments.

VIRGINIA—Continued

	Channel No.
Pennington Gap	288A
Petersburg	237A, 257A
Pulaski	296A
Radford	269A
Richmond	233, 251, 271, 279, 293
Roanoke	222, 235, 256
Salem	228A
South Boston	248
Staunton	228A
Tappahannock	288A
Tasley	277
Tazewell	261A
Warrenton	232A, 299
Warsaw	265A
Williamsburg	243
Winchester	223, 273
Woodbridge	290

WASHINGTON

	Channel No.
Aberdeen	284
Bellingham	225, 282
Bremerton	295
Centralia	275
Chelan	228A
Colfax	272A
Colville	221A
Edmonds	287
Ellensburg	237A
Ephrata	240A
Grand Coulee	253, 266
Hoquiam	280A
Kennewick	287
Longview	288A
Lynden	293
Moses Lake	262
Omak	224A
Opportunity	241
Othello	249A
Prosser	269A
Pullman	285A
Quincy	276A
Richland	274, 292A
Seattle	223, 227, 231, 235, 239, 243, 251, 255, 260, 264, 268, 273, 299
Spokane	225, 229, 251, 255, 260, 289, 300
Sunnyside	244A
Tacoma	247, 280A, 291
Toppenish	224A
Walla Walla	227, 246
Wenatchee	271, 285A
Yakima	233, 261, 297

WEST VIRGINIA

	Channel No.
Bath (Berkeley Springs)	228A
Beckley	258, 279
Bluefield	283, 292A
Charleston	241, 248, 253, 260, 274
Charles Town	252A
Clarksburg	224A, 285A, 293
Fairmont	250, 276A
Grafton	265A
Huntington	263, 277, 300
Keyser	231
Logan	270
Martinsburg	248
Montgomery	265A
Morgantown	261A, 270
Moundsville	288A

WEST VIRGINIA—Continued

	Channel No.
New Martinsville	280A
Oak Hill	231, 290
Parkersburg*	236, 257A, 276A
Princeton	240A
Ronceverte	288A
St. Albans	286
Weston	272A
Wheeling	247, 254, 298
Williamson	243

WISCONSIN

	Channel No.
Antigo	285A
Appleton	289
Ashland	240A
Beaver Dam	237A
Beloit	237A
Berlin	272A
Chippewa Falls	288A
Dodgeville	[1] 257A
Durand	240A
Eagle River	232A
Eau Claire	231, 264, 283
Fond du Lac	296A
Fort Atkinson	297
Green Bay	252A, 266
Greenfield Twsp	235
Hartford	285A
Hayward	221A
Janesville	260
Kaukauna	285A
Kenosha	236, 245
Kewaunee	224A
La Crosse	227, 240A
Ladysmith	279
Madison	251, 268, 273, 281
Manitowoc	221A, 272A
Marinette	236
Marshfield	293
Medford	257A
Menomonee Falls	252A
Menomonie	221A
Merrill	228A
Middleton	292A
Milwaukee	227, 233, 239, 243, 247, 256, 271, 275, 299
Minocqua	240A
Monroe	229
Neenah-Menasha	232A, 261A
Neillsville	298
New London	228A
New Richmond	296A
Oconto	296A
Oshkosh	244A, 280A
Park Falls	252A
Plateville	[1] 296A
Portage	261A

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*50 kw ERP and 500 foot antenna a.a.t. or equivalent.

[1] Effective 3 a.m. central standard time, Dec. 1, 1973 (concurrently with the expiration of the outstanding licenses for Dodgeville, Wis., Station WDMP-FM on Channel 296A and Platteville, Wis., Station WSWW-FM on Channel 257A), or such earlier date as both of these stations at their request cease operation on their present channels.

Wisconsin—Continued

	Channel No.
Port Washington	261A
Prairie Du Chien	232A
Racine	221A, 264
Reedsburg	285A
Rhinelander	248, 300
Rice Lake	242
Richland Center	265A
Ripon	240A
River Falls	292A
Sauk City	244A
Shawano	257A, 274
Sheboygan	249A
Shell Lake	237A
Sparta	246
Stevens Point	250
Sturgeon Bay	230, 240A
Sun Prairie	221A
Tomah	255
Tomahawk	261A
Viroqua	272A
Watertown	231
Waukesha	291
Waupaca	244A
Waupun	257A
Wausau	238, 270
Wauwatosa	279
West Bend	223
Wisconsin Dells	[1] 296A
Wisconsin Rapids	277

Wyoming

	Channel No.
Buffalo	224A
Casper	233, 238
Cheyenne	250, 292A
Cody	232A
Douglas	221A
Evanston	292A
Gillette	228A
Lander	248
Laramie	241, 256
New Castle	257A
Powell	225
Rawlins	224A
Riverton	228A
Rock Springs	243, 258
Sheridan	235, 243
Thermopolis	252A, 269A
Torrington	257A
Wheatland	269A
Worland	240A

U.S. Territories and Possessions

	Channel No.
Guam:	
Agana	230, 238
Puerto Rico:	
Adjuntas	275
Aguadilla	225, 262
Arecibo	293, 297
Bayamon	234, 264
Caguas	277
Cayey	249A
Cabo Rojo	221A
Coamo	223
Fajardo	243
Guayama	295
Humacao	299
Isabella	268
Luquillo	221A
Manati	245
Mayaguez	231, 248, 256
Ponce	227, 270, 286
Quebradillas	252A
Rio Piedras	239
San German	236
San Juan	229, 253, 260, 273, 284, 289
Utuado	281
Yauco	241
Virgin Islands:	
Charlotte Amalie	250, 266
Christiansted	258, 291

(Sec. 316, 66 Stat. 717; 47 U.S.C. 316)

Editorial Note: § 73.202 was published in its entirety at 30 F.R. 12711, Oct. 6, 1965. Federal Register citations to subsequent amendments will be found in the List of CFR Sections Affected.

Effective Date Note: Amendments appearing at 37 F.R. 18335, Sept. 9, 1972 and 37 F.R. 18538, Sept. 14, 1972 are effective Oct. 17, 1972; those appearing at 37 F.R. 20031 and 20032, Sept. 23, 1972, are effective Oct. 31, 1972.

§ 73.203 Availability of channels.

(a) Subject to the provisions of paragraph (b) of this section, applications may be filed to construct FM broadcast stations only on the channels assigned in the Table of Assignments (§ 73.202 (b)) and only in communities listed therein. Applications which fail to comply with this requirement, whether or not accompanied by a petition to amend the Table, will not be accepted for filing: *Provided, however,* That applications specifying channels which accord with publicly announced Commission orders changing the table of assignments will be accepted for filing even though such applications are tendered before the effective dates of such channel changes.

(b) A channel assigned to a community listed in the Table of Assignments is available upon application in any unlisted community which is located within 10 miles of the listed community if the channel requested is a Class A channel and 15 miles if the channel is a Class B/C channel, provided no other channel in the listed community has been similarly assigned to another community and provided further that the unlisted community has not already removed a channel from any other listed community. Where channels are assigned to two or more communities listed in combination in the table of assignments the provisions of this paragraph shall apply separately to each community so listed. The distance between communities shall be determined by the distance between the respective coordinates thereof as set forth in the publication of the U.S. Department of Commerce entitled "Air Line Distance Between Cities in the United States". (This publication may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.) If said publication does not contain the coordinates of either or both communities, the coordinates of the main post office in either or both of the communities shall be used. The method to be followed in making the measurements is set forth in § 73.208(c).

[33 F.R. 6663, May 1, 1968, and 33 F.R. 15420, Oct. 17, 1968]

§ 73.204 International agreements and other restrictions on use of channels.

(a) Authorizations issued by the Commission for FM broadcast facilities will be subject to the provisions of any agreements entered into by the United States with Canada concerning FM assignments and authorizations. The Commission may decide after consultation with Canada that an application should not be granted; or if, pursuant to an agreement providing for timely objection after grant, Canada files such objection, the Commission may on its own motion set aside the grant pending consideration. The Commission will give notice of the filing of such objections.

(b) The frequency 89.1 Mc/s (channel 206) is reserved in the New York City metropolitan area for the use of the United Nations with the equivalent of an antenna height of 500 feet above average terrain and effective radiated power of 20 kilowatts, and the Commission will make no assignments which would cause objectionable interference with such use.

(c) In Alaska, the frequency band 88–100 Mc/s is allocated exclusively to Government radio services and the non-Government fixed service. The frequencies 83.1 through 99.9 Mc/s (channels 201 through 260) will not be assigned in Alaska for use by FM broadcast stations.

(d) In Hawaii, the frequency band 98–108 Mc/s is allocated for non-broadcast use. The frequencies 98.1 through 107.9 Mc/s (channels 251 through 300) will not be assigned in Hawaii for use by FM broadcast stations.

§ 73.205 Zones.

For the purpose of allocation and assignment, the United States is divided into three zones as follows:

(a) Zone I consists of that portion of the United States located within the confines of the following lines drawn on the United States Albers Equal Area Projection Map (based on standard parallels 29½° and 45½°; North American datum): Beginning at the most easterly point on the State boundary line between North Carolina and Virginia; thence in a straight line to a point on the Virginia-West Virginia boundary line located at north latitude 37°49' and west longitude 80°12'30"; thence westerly along the southern boundary lines of the States of West Virginia, Ohio, Indiana, and Illinois to a point at the junction of the Illinois, Kentucky, and Missouri State boundary lines; thence northerly along the western boundary line of the State of Illinois to a point at the junction of the Illinois, Iowa, and Wisconsin State boundary lines; thence easterly along the northern State boundary line of Illinois to the 90th meridian; thence north along this meridian to the 43.5° parallel; thence east along this parallel to the United States-Canada border; thence southerly and following that border until it again intersects the 43.5° parallel; thence east along this parallel to the 71st meridian; thence in a straight line to the intersection of the 69th meridian and the 45th parallel; thence east along the 45th parallel to the Atlantic Ocean. When any of the above lines pass through a city, the city shall be considered to be located in Zone I. (See Figure 1 of § 73.699.)

(b) Zone I-A consists of Puerto Rico, the Virgin Islands and that portion of the State of California which is located south of the 40th parallel.

(c) Zone II consists of Alaska, Hawaii and the rest of the United States which is not located in either Zone I or Zone I-A.

[29 F.R. 14116, Oct. 14, 1964, and 31 F.R. 10125, July 27, 1966]

§ 73.206 Classes of commercial channels, and stations operating thereon.

(a) *Class A channels and stations.* (1) Except as provided in § 73.204, the following frequencies are designated as Class A channels and are assigned for use, in all zones, by Class A stations only:

Frequency (Mc/s)	*Channel No.*	*Frequency (Mc/s)*	*Channel No.*
92.1	221	100.1	261
92.7	224	100.9	265
93.5	228	101.7	269
94.3	232	102.3	272
95.3	237	103.1	276
95.9	240	103.9	280
96.7	244	104.9	285
97.7	249	105.5	288
98.3	252	106.3	292
99.3	257	107.1	296

(2) A Class A station is a station which operates on a Class A channel, and is designed to render service to a relatively small community, city, or town, and the surrounding rural area.

(3) A Class A station will not be authorized to operate with effective radiated power greater than 3 kilowatts (4.8 dbk), and the coverage of a Class A station shall not exceed that obtained from 3 kilowatts effective radiated power and antenna height above average terrain of 300 feet. For provisions concerning minimum facilities, and concerning reduction in power where antenna height above average terrain exceeds 300 feet, see § 73.211.

(b) *Class B–C channels and Class B and Class C stations.* (1) Except for the channels specified in paragraph (a)(1) of this section, all of the channels listed in § 73.201 from 222 through 300 (92.3 through 107.9 Mc/s) are classified as Class B–C channels, and (subject to the restrictions set forth in § 73.204) are assigned for use in Zones I and I–A by Class B stations only, and for use in Zone II by Class C stations only (there are no Class C stations in Zones I or I–A and no Class B stations in Zone II).

(2) A Class B station is a station which operates on a Class B–C channel in Zone I or Zone I–A, and is designed to render service to a sizable community, city, or town, or to the principal city or cities of an urbanized area, and to the surrounding area.

(3) With respect to Class B stations authorized after September 10, 1962, no such station will be authorized with effective radiated power greater than 50 kilowatts (17 dbk), and the coverage of a Class B station authorized after that date shall not exceed that obtained from 50 kilowatts effective radiated power and 500 feet antenna height above average terrain. For provisions concerning minimum power, and concerning reduction in power where antenna height above average terrain exceeds 500 feet, see § 73.211.

(4) A Class C station is a station which operates on a Class B–C channel in Zone II, and is designed to render service to a community, city, or town, and large surrounding area.

(5) With respect to Class C stations authorized after September 10, 1962, no such station will be authorized with effective radiated power greater than 100 kilowatts (20 dbk), and the coverage of a Class C station authorized after that date shall not exceed that obtained from 100 kilowatts effective radiated power and antenna height above average terrain of 2,000 feet. For provisions concerning minimum power, and reduction in power where antenna height above average terrain exceeds 2,000 feet, see § 73.211.

§ 73.207 Minimum mileage separations between cochannel and adjacent-channel stations on commercial channels.

(a) Petitions to amend the table of assignments (§ 73.202(b)) (other than those expressly requesting amendment of this section or § 73.205) will be dismissed and no application for a new station, change in the channel of an existing station, or increase in antenna height or effective radiated power, or change in location of an existing station will be accepted for filing unless the proposed facilities will be located at least as far from the transmitter sites of other cochannel and adjacent-channel stations (both existing and proposed) as the distances in miles specified in this paragraph. Proposed stations of the respective classes shown in the left-hand column of the following table shall be located no less than the distance shown from cochannel stations and first adjacent-channel stations (200 kc/s removed) and second and third adjacent-channel stations (400 and 600 kc/s removed) of the classes shown in the remaining columns of the table. The distances shown between stations of different classes apply regardless of which is the proposed stations under consideration (e.g., distances shown from a new Class A station to an existing Class C station are also the distances between a new Class C and an existing Class A station). The distances between Class B and Class C stations apply only across zone lines. The adjacent-channel spacings listed also apply: (1) To applications for noncommercial educational facilities on Channels 218, 219, or 220, with respect to other stations on Channels 221, 222, or 223; (2) to applications for facilities on Channels 221, 222, or 223, with respect to noncommercial educational stations on Channels 218, 219, or 220 (for classification of noncommercial education stations, see § 73.504).

NOTE: Stations or assignments separated in frequency by 10.6 or 10.8 Mc/s (53 or 54 channels) will not be authorized unless they conform to the following separation table:

Class of stations	*Required spacing in miles*
A to A	5
B to A	10
B to B	15
C to A	20
C to B	25
C to C	30

(b) The zone in which the transmitter of an FM station is located or proposed to be located determines the applicable rules with respect to minimum required spacings.

[28 F.R. 13623, Dec. 14, 1963, as amended at 29 F.R. 14116, Oct. 14, 1964; 30 F.R. 8680, July 9, 1965; 31 F.R. 10126, July 27, 1966]

§ 73.208 Reference points and distance computations.

(a) In considering petitions to amend the table of assignments (§ 73.202(b)), the following reference points shall be used by the Commission in determining separations between communities:

(1) Where transmitter sites for the pertinent channels have been authorized in communities involved in a petition to amend the table of assignments, separations between such communities shall be determined by the distance between the coordinates of the authorized transmitter sites in the respective communities as set forth in the Commission's authorizations therefor.

(2) Where an authorized transmitter site is available for use as a reference point in one community but not in the other for the pertinent channels, separations shall be determined by the distance between the coordinates of the transmitter site as set forth in the Commission's authorization therefor and the coordinates of the other community as set forth in the publication of the United States Department of Commerce entitled "Air Line Distances Between Cities in the United States." If said publication does not contain the coordinates for said other community, the coordinates of the main post office thereof shall be used.

(3) Where no authorized transmitter sites are available for use as reference points in both communities for the pertinent channels, the distance between the two communities listed in the above publication shall be used. If said publication does not contain such distance, the separation between the two communities shall be determined by the distance between the coordinates thereof as set forth in said publication. Where such coordinates are not contained in said publication, the coordinates of the main post offices of said communities shall be used.

CLASS OF STATION AND FREQUENCY SEPARATION (kc/s)

Class of station	Class A				Class B				Class C				10-watt educational			
	Co-Ch.	200	400	600	Co-Ch.	200	400	600	Co-Ch.	200	400	600	Co-Ch.	200	400	600
A	65	40	15	15		65	40	40		105	65	65		30	15	15
B					150	105	40	40	170	135	65	65			40	40
C									180	150	65	65			65	65
10-watt educational																

NOTE: Intermediate frequency amplifiers of most FM broadcast receivers are designed to operate on 10.7 megacycles. For this reason the assignment of two stations in the same area, one with a frequency of 10.6 or 10.8 megacycles removed from that of the other, will be avoided if possible.

(4) Where the distance between the reference point in a community to which a channel is proposed to be assigned and the reference point in another community or communities does not meet the minimum separation requirements of § 73.207, the channel may be assigned to such community upon a showing that a transmitter site is available that would meet the minimum separation requirements of § 73.207 and the minimum field intensity requirements of § 73.315. In

such cases, where a station is not authorized in the community or communities to which measurements from the proposed channel assignment must be made pursuant to § 73.207, a showing should also be made that the distance between suitable transmitter sites in such other community or communities and the proposed transmitter site for the new channel meet the Commission's minimum spacing and coverage requirements.

(b) Station separations in licensing proceedings shall be determined by the distance between the coordinates of the proposed transmitter site in one community and

(1) The coordinates of an authorized transmitter site for the pertinent channel in the other community; or, where such transmitter site is not available for use as a reference point,

(2) The coordinates of the other community as set forth in the above-described publication of the United States Department of Commerce; or, if not contained therein,

(3) The coordinates of the main post office of such other community.

(4) In addition, where there are pending applications in other communities which, if granted, would have to be considered in determining station separations, the coordinates of the transmitter sites proposed in such applications must be used to determine whether the requirements with respect to minimum separations between the proposed stations in the respective cities have been met.

(c) The distance between reference points is considered to be the length of the hypotenuse of a right triangle, one side of which is the difference in latitude of the reference points and the other side the difference in longitude of the two reference points, and shall be computed by the method set forth in the paragraph. (This method is appropriate for determining distances up to 220 miles, and for such distances will normally be more accurate than using spherical trigonometry without correction for the spheroidal shape of the earth. However, its accuracy deteriorates rapidly at distances beyond 300 miles and this method should not be used to compute greater distances.)

(1) Determine the difference in latitude and the difference in longitude between the two reference points. Convert these two differences into degrees and decimal parts of a degree in accordance with Table I of § 73.698.

(2) Determine the middle latitude of the two reference points to the nearest second of latitude (average the latitudes of the two points).

(3) Multiply the difference in latitude by the number of miles per degree of latitude difference obtained from Table II of § 73.698 for the appropriate middle latitude (interpolate linearly). This determines the north-south distance in statute miles (L_s).

NOTE: In determining necessary distance computations for Alaska, Hawaii, and the Territories, the appropriate mileage per degree may be obtained by linear interpolation of the data given on pages 1246 and 1247 of the tables in publication H.O. No. 9 (Bowditch-American Practical Navigator—1958 Edition) of the U.S. Navy Department, Hydrographic Office. This publication may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.

(4) Multiply the difference in longitude by the number of miles per degree of longitude difference, obtained from Table III of § 73.698, for the appropriate middle latitude (interpolate linearly). This determines the east-west distance in statute miles (L_e).

(5) Determine the distance between the two reference points by the square root of the sum of the squares of the distances obtained in subparagraphs (3) and (4) of this paragraph, using sufficient decimal figures to determine the distance to the nearest mile; i.e.,

$$D=(L_s^2+L_e^2)^{1/2}$$

where:

D=Distance in statute miles.
L_s=North-south distance in statute miles.
L_e=East-west distance in statute miles.

[28 F.R. 13623, Dec. 14, 1963, as amended at 29 F.R. 14116, Oct. 14, 1964]

§ 73.209 Protection from interference.

(a) Permittees and licensees of FM broadcast stations are not protected from any interference which may be caused by the grant of a new station, or of authority to modify the facilities of an existing station, in accordance with the provisions of this subpart.

(b) The nature and extent of the protection from interference accorded to FM broadcast stations is limited solely to the protection which results from the minimum assignment and station separation requirements and the rules with respect to maximum powers and antenna heights set forth in this subpart.

(c) When the Commission determines that grant of an application would serve the public interest, convenience, and necessity and the instrument of authoriza- designated antenna farm area which results in mileage separations less than those specified in this subpart, FM broadcast station permittees and licensees shall be afforded protection from interference equivalent to the protection afforded under the minimum mileage separations specified in this subpart.

[28 F.R. 13623, Dec. 14, 1963, as amended at 32 F.R. 8813, June 21, 1967]

§ 73.210 Station location, main studio location, and program origination.

(a)(1) Except as provided in paragraph (b) of this section, each FM broadcast station will be licensed to serve primarily a particular city, town, political subdivision, or community which will be specified in the station license and the station will be considered to be located in such place.

(2) The main studio of an FM broadcast station shall be located in the principal community to be served. Where the principal community to be served is a city, town, village or other political subdivision, the main studio shall be located within the corporate boundaries of such city, town, village or other political subdivision. Where the principal community to be served does not have specifically defined political boundaries, applications will be considered on a case-to-case basis in the light of the particular facts involved to determine whether the main studio is located within the principal community to be served.

(3) Where an adequate showing is made that good cause exists for locating a main studio outside the principal community to be served and that to do so would be consistent with the operation of the station in the public interest, the Commisison will permit the use of a main studio location other than that specified in subparagraph (2) of this paragraph. No relocation of a main studio to a point outside the principal community to be served, or from one such point outside the community to another, may be made without first securing a modification of construction permit or license, except for relocation at the AM main studio location of a commonly owned AM station licensed to the same community. FCC Form 301 shall be used to apply therefor. The main studio may, however, be relocated within the principal community to be served, or be moved from a location outside the community to one within it, without specific authority, but the Commission shall be notified promptly of any such relocation.

(4) A majority (computed on the basis of duration and not number) of a station's programs or, in the case of a station affiliated with a network, two-thirds of such station's non-network programs, whichever is smaller, shall originate from the main studio or from other studios or remote points situated in the place where the station is located.

(b)(1) Stations will be licensed to serve more than one city, town, political subdivision, or community only where a satisfactory showing is made that each such place meets all the requirements of this subpart with respect to the location of main studios; that the station can and will originate a substantial number of local live programs from each such place; and that the requirements as to origination of programs contained in paragraph (a) of this section would place an unreasonable burden on the station if it were licensed to serve only one city, town, political subdivision, or community.

(2) A station licensed to serve more than one place shall be considered to be located in and shall maintain main studios in each such place.

(3) With respect to such station, the requirements in paragraph (a) of this section as to origination of programs tion specifies an antenna location in a shall be satisfied by the origination of programs from any or all of the main studios, other studios, or remote points situated in any or all of the places in which the main studios are located.

[28 F.R. 13623, Dec. 14, 1963, as amended at 31 F.R. 10126, July 27, 1966; 36 F.R. 3266, Feb. 20, 1971]

§ 73.211 Power and antenna height requirements.

(a) *Minimum requirements.* (1) Except as provided in paragraph (b)(2) of this section, the minimum effective radiated power shall be,

Class A	100 watts (−10 dbk)
Class B	5 kw (7 dbk)
Class C	25 kw (14 dbk)

(2) No minimum antenna height above average terrain is specified.

(b) *Maximum power and antenna height.* (1) The maximum effective radiated power in any direction, and maximum antenna height for equivalence purposes, shall be as follows for the various classes of stations:

(2) Antenna heights may be used exceeding those specified in this paragraph for equivalence purposes, provided effective radiated power is reduced in the amount determined by use of the appropriate curves in Figure 3 of § 73.333. Where, under Figure 3 of § 73.333, effective radiated power must be reduced to an amount less than the normal minimum specified in paragraph (a) (1) of this section for the class of station involved, the effective radiated power determined by Figure 3 of § 73.333 shall be the minimum for the station involved.

Class	Maximum power	Maximum antenna height (feet above average terrain)
A	3 kw (4.8 dbk)	300
B	50 kw (17.0 dbk)	500
C	100 kw (20.0 dbk)	2,000

(3) In Puerto Rico and the Virgin Islands Class B stations may use antenna heights up to 2,000 feet above average terrain with effective radiated powers up to 25 kw. For antenna heights above 2,000 feet, the power shall be reduced so that the station's 1 mv/m contour (located pursuant to Figure 1 of § 73.333) will extend no farther from the station's transmitter than with the facilities of 25 kw and antenna height of 2,000 feet. For powers above 25 kw (up to 50 kw) no antenna heights will be authorized which result in greater coverage by the 1 mv/m contour than that obtained with the facilities of 25 kw and antenna height of 2,000 feet.

(c) *Determination of applicable rules.* The zone in which the transmitter of an FM station is located or proposed to be located determines the applicable rules with respect to the class of station, and thus the minimum and maximum requirements as to facilities.

(d) *Existing stations.* Stations authorized as of September 10, 1962 which do not conform to the requirements of this section, may continue to operate as authorized. For stations operating with facilities in excess of those specified in paragraph (b) of this section no changes in facilities will be authorized which either increases the effective radiated power or extends the location of the 1 mv/m field strength contour beyond that of its present authorization in any direction. The provisions of this section shall not apply to applications to increase facilities for those stations operating with powers less than the minimum powers specified in paragraph (a) of this section.

[28 F.R. 13623, Dec. 14, 1963, as amended at 31 F.R. 10126, July 27, 1966; 33 F.R. 7574, May 22, 1968]

§ 73.212 Administrative changes in authorizations.

(a) In the issuance of FM broadcast station authorizations, the Commission will specify the transmitter output power and effective radiated power in accordance with the following tabulation:

Power (watts or kw)	*Rounded out to nearest figure (watts or kw)*
1 to 3	.05
3 to 10	.1
10 to 30	.5
30 to 100	1
100 to 300	5
300 to 1,000	10

(b) Antenna height above average terrain will be specified in accordance with the following tabulation:

Antenna height above average terrain	*Rounded out to nearest figures (feet)*
0 to 100	1
100 to 300	5
Over 300	10

§ 73.213 Stations at spacings below the minimum separations.

(a) Stations which are separated from other co-channel or adjacent channel stations less than the minimum distances specified in § 73.207 may apply for changes in facilities provided the requested facilities conform with the following table:

(b) Stations authorized facilities in excess of those specified in this section may continue to operate with such facilities.

(c) Stations may elect to operate omnidirectionally with facilities no greater than the least they should be permitted in any direction under paragraph (a) of this section. Greater facilities (up to the maximum specified in § 73.211(b) for their class) may be used if, by use of a directional antenna, radiation in any direction in which a short separation exists is reduced to no more than that permitted under paragraph (a) of this section. Applications for use of directional antennas must be in conformance with § 73.316(d); in addition, the increase in radiation off the line between the short-spaced stations shall not exceed 2 db per 10 degrees of azimuth; and in no event shall radiation in any direction exceed the maximum permitted under § 73.211(b) for the particular class of station.

(d) Stations will be authorized maximum facilities for their class in those directions in which they are short-spaced to other stations on second or third adjacent channels.

(e) The powers listed in the table are the maximums to be authorized. Antenna heights may be used exceeding those specified in the table for equivalence purposes, provided the effective radiated power is reduced in the amount necessary to place the 1 mv/m contour at no greater distance as determined by use of Figure 1 of § 73.333. The antenna height value to be used is that above average terrain and not that in any particular direction. Where antenna heights below 100 feet are encountered (or negative heights) an assumed value of 100 feet above average terrain shall be assumed for the purposes of this paragraph.

(f) The following provisions will govern applications for move of transmitter site:

(1) No application to move will be accepted which creates short spacing to standard spaced stations and assignments less than the distances specified in § 73.207, including second and third adjacent channel separations. This provision applies even if in other respects the application would be acceptable under this paragraph.

(2) Stations short-spaced with respect to other stations under § 73.207 may apply to move transmitter site, even though by the move the separation would be further shortened, under the following conditions and with the following facilities:

(i) Where the short separation is second or third adjacent channel, with any facilities up to the maximum permitted under § 73.211.

(ii) Where the short separation is co-channel or first adjacent channel, stations may apply for facilities up to the maximum for the mileage bracket in which they would fall after the move, as specified in paragraph (a) of this section, or with their present facilities if they are not moving so far as to fall into a lower bracket. (See subdivision (iii) of this subparagraph for further restrictions on very short-spaced stations.)

FACILITIES TO BE AUTHORIZED FOR SHORT-SPACED FM STATIONS

Class of station	Separation in miles		Facilities authorized	
	Co-channel	First adjacent	Power (kw)	Antenna height (ft.)
A to A	45-65		3	300.
A to A	40-44		2	300.
A to A	less than 40		1	300.
A to B		50-65	3 50	300 Class A. 500 Class B.
A to B		40-49	3 20	300 Class A. 500 Class B.
A to B		less than 40	3 10	300 Class A. 500 Class B.
A to C		80-105	3 100	300 Class A. 2,000 Class C.
A to C		60-79	3 50	300 Class A. 2,000 Class C.
A to C		less than 60	3 20	300 Class A. 2,000 Class C.
B to B	125-150	80-105	50	500.
B to B	100-124	65-79	20	500.
B to B	75-99	50-64	10	500.
B to B	less than 75	less than 50	5	500.
B to C	140-170	110-135	50 100	500 Class B. 2,000 Class C.
B to C	110-139	85-109	20 50	500 Class B. 2,000 Class C.
B to C	90-109	60-84	10 20	500 Class B. 2,000 Class C.
B to C	less than 90	less than 60	5 10	500 Class B. 2,000 Class C.
C to C	150-180	125-150	100	2,000.
C to C	120-149	95-124	50	2,000.
C to C	100-119	75-94	20	2,000.
C to C	less than 100	less than 75	10	2,000.

(iii) The provisions of this subparagraph apply where the resulting separation after the move would be less than: co-channel, 40 miles Class A to Class A, 75 miles Class B to Class B, 90 miles Class B to Class C or vice versa, or 100 miles Class C to Class C; first adjacent channel, 40 miles Class A to Class B or vice versa, 50 miles Class B to Class B, 60 miles Class A or B to Class C, or vice versa, and 75 miles Class C to Class C. Stations so situated may apply to move and use either their present facilities or no more than those specified for their mileage bracket in paragraph (a) of this section, if the move would not decrease the short distance by more than three miles. If the move would decrease the short distance a greater amount, a station will be permitted no more than the facilities which would give it, in the critical direction, a 1 mv/m contour located no further out than that which would result from using the former location and the maximum facilities specified for the mileage bracket.

[29 F.R. 14116, Oct. 14, 1964]

ADMINISTRATIVE PROCEDURE

§ 73.214 Cross reference.

See Subpart D of Part 1 of this chapter, for general requirements as to applications, filing of applications and description of application forms, other forms and information to be filed with the Commission, the manner in which applications are processed, and provisions applying to action on applications. See § 1.1111 of Subpart G of that part for the fees to be paid in connection with applications for facilities in the service covered in this subpart.

§ 73.215 Notification of filing of applications.

(a) *Radio Astronomy and Radio Research Installations*. In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, West Virginia, and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, West Virginia, an applicant for authority to construct a new FM broadcast station or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39°15′ N on the north, 78°30′ W on the east, 37°30′ N on the south, and 80°30′ W on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P.O. Box No. 2, Green Bank, West Virginia 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinate of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the Observatory. After receipt of such applications, the Commission will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(b) *Location on Government land*. Applicants proposing to construct a radio station on a site located on land under the jurisdiction of the U.S. Forest Service, U.S. Department of Agriculture, or the Bureau of Land Management, U.S. Department of the Interior, must supply the information and must follow the procedure prescribed by § 1.70 of this chapter.

[28 F.R. 13623, Dec. 14, 1963, as amended at 32 F.R. 2891, Feb. 15, 1967]

§ 73.216 Equipment tests.

(a) During the process of construction of an FM broadcast station, the permittee, after notifying the Commission and Engineer in Charge of the radio district in which the station is located, may without further authority of the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, the rules and regulations, and the applicable engineering standards.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, convenience, or necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid.

(d) Inspection of a station will ordinarily be required during the equipment test period and before the commencement of the program test. After construction and after adjustments and measurements have been completed to show compliance with the terms of the construction permit, the technical provisions of the application therefor, the rules and regulations and the applicable engineering standards, the permittee should notify the Engineer in Charge of the radio district in which the station is located that it is ready for inspection.

(e) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

[28 F.R. 13623, Dec. 14, 1963, as amended at 33 F.R. 15420, Oct. 17, 1968]

§ 73.217 Program tests.

(a) Upon completion of construction of an FM broadcast station in accordance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations and the applicable engineering standards, and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee may request authority to conduct program tests: *Provided*, That such request shall be filed with the Commission at least ten (10) days prior to the date on which it is desired to begin such operation and that the Engineer in Charge of the radio district in which the station is located is notified. (All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the license application.)

(b) Program tests shall not commence until specific Commission authority is received. The Commission reserves the right to change the date of the beginning of such tests or to suspend or revoke the authority for program tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Unless sooner suspended or revoked, program test authority continues valid during Commission consideration of the application for license and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated by final determination upon the application for station license.

(d) All operation under program test authority shall be in strict compliance with the rules governing FM broadcast stations and in strict accordance with representations made in the application for license pursuant to which the tests were authorized.

(e) The granting of program test authority shall not be construed as approval by the Commission of the application for station license.

§ 73.218 Normal license period.

(a) Initial licenses for FM broadcast stations will ordinarily be issued for a period running until the date specified in this section for the State or territory in which the station is located or, if issued after such date, to the next triennial renewal date determined in accordance with this section; and, when renewed, will normally be renewed for 3 years: *Provided, however*, That, if the Commission finds that the public interest, convenience, or necessity will be served thereby, it may issue either an initial license or a renewal thereof for a lesser term. The time of expiration of normally issued initial and renewal licenses will be 3 a.m., local time, on the following dates, and at 3-year intervals thereafter:

(1) For stations located in Iowa and Missouri, February 1, 1968.

(2) For stations located in Minnesota, North Dakota, South Dakota, Montana, and Colorado, April 1, 1968.

(3) For stations located in Kansas, Oklahoma, and Nebraska, June 1, 1968.

(4) For stations located in Texas, August 1, 1968.

(5) For stations located in Wyoming, Nevada, Arizona, Utah, New Mexico, and Idaho, October 1, 1968.

(6) For stations located in California, December 1, 1968.

(7) For stations located in Washington, Oregon, Alaska, Guam, and Hawaii, February 1, 1969.

(8) For stations located in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, April 1, 1969.

(9) For stations located in New Jersey and New York, June 1, 1969.

(10) For stations located in Delaware and Pennsylvania, August 1, 1969.

(11) For stations located in Maryland, District of Columbia, Virginia, and West Virginia, October 1, 1969.

(12) For stations located in North Carolina and South Carolina, December 1, 1969.

(13) For stations located in Florida, Puerto Rico, and Virgin Islands, February 1, 1970.

(14) For stations located in Alabama and Georgia, April 1, 1970.

(15) For stations located in Arkansas, Louisiana, and Mississippi, June 1, 1970.

(16) For stations located in Tennessee, Kentucky, and Indiana, August 1, 1970.

(17) For stations located in Ohio and Michigan, October 1, 1970.

(18) For stations located in Illinois and Wisconsin, December 1, 1970.

NOTE: For the cutoff data for the filing of applications mutually exclusive with, and petitions to deny, renewal applications, see § 1.516(e) of this chapter.

[33 F.R. 4411, Mar. 12, 1968, as amended at 34 F.R. 7967 May 21, 1969]

LICENSING POLICIES

§ 73.231 Exclusive affiliation of station.

No license shall be granted to an FM broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, broadcasting the programs of any other network organization. (The term "network organization" as used herein includes national and regional network organizations. See ch. VII, J of Report on Chain Broadcasting, FCC Order No. 37 (Docket 5060), May 1941.)

[33 F.R. 15420, Oct. 17, 1968]

§ 73.232 Territorial exclusivity.

No license shall be granted to an FM broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which prevents or hinders another broadcast station serving substantially the same area from broadcasting the network's programs not taken by the former station, or which prevents or hinders another broacast station serving a substantially different area from broadcasting any program of the network organization. This section shall not be construed to prohibit any contract, arrangement, or understanding between a station and a network organization pursuant to which the station is granted the first call in its primary service area upon the programs of the network organization.

§ 73.233 Term of affiliation.

No license shall be granted to an FM broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which provides, by original terms, provisions for renewal, or otherwise for the affiliation of the station with the network organization for a period longer than 2 years: *Provided*, That a contract, arrangement, or understanding for a period up to 2 years, may be entered into within 6 months prior to the commencement of such period.

§ 73.234 Option time.

No license shall be granted to an FM broadcast station which options for network programs any time subject to call on less than 56 days' notice, or more time than a total of 3 hours within each of four segments of the broadcast day, as herein described. The broadcast day is divided into four segments, as follows: 8 a.m. to 1 p.m.; 1 p.m. to 6 p.m.; 6 p.m. to 11 p.m.; 11 p.m. to 8 a.m. (These segments are to be determined for each station in terms of local time at the location of the station but may remain constant throughout the year regardless of shifts from nonadvanced to advanced time or vice versa.) Such option may not be exclusive as against other network organizations and may not prevent or hinder the station from optioning or selling any or all of the time covered by the option, or other time, to other network organizations.

NOTE 1: As used in this section, an option is any contract, arrangement, or understanding, express or implied, between a station and a network organization which prevents or hinders the station from scheduling programs before the network agrees to utilize the time during which such programs are scheduled, or which requires the station to clear time already scheduled when the network organization seeks to utilize the time.

NOTE 2: All time options permitted under this section must be for specified clock hours, expressed in terms of any time system set forth in the contract agreed upon by the station and network organization. Shifts from advanced to nonadvanced time or vice versa may or may not shift the specified hours correspondingly as agreed by the station and network organization.

[28 F.R. 13623, Dec. 14, 1963, as amended at 33 F.R. 4412, Mar. 12, 1968]

§ 73.235 Right to reject programs.

No license shall be granted to an FM broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which (a), with respect to programs offered pursuant to an affiliation contract, prevents or hinders the station from rejecting or refusing network programs which the station reasonably believes to be unsatisfactory or unsuitable; or which (b), with respect to network programs so offered or already contracted for, prevents the station from rejecting or refusing any program which, in its opinion, is contrary to the public interest, or from substituting a program of outstanding local or national importance.

§ 73.236 Network ownership of stations.

No license shall be granted to a network organization, or to any person directly or indirectly controlled by or under common control with a network organization, for an FM broadcast station in any locality where the existing FM broadcast stations are so few or of such unequal desirability (in terms of coverage, power, frequency, or other related matters) that competition would be substantially restrained by such licensing. (The word "control" as used herein is not limited to majority stock ownership, but includes actual working control in whatever manner exercised.)

[33 F.R. 15420, Oct. 17, 1968]

§ 73.237 Dual network operation.

No license shall be issued to an FM broadcast station affiliated with a network organization which maintains more than one network of FM broadcast stations: *Provided*, That this section shall not be applicable if such networks are not operated simultaneously, or if there is no substantial overlap in the territory served by the group of stations comprising each such network.

§ 73.238 Control by networks of station rates.

No license shall be granted to an FM broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, fixing or altering its rates for the sale of broadcast time for other than the network's programs.

§ 73.239 Use of common antenna site.

No FM broadcast station license or renewal of FM broadcast station license will be granted to any person who owns, leases, or controls a particular site which is peculiarly suitable for FM broadcasting in a particular area and (a) which is not available for use by other FM broadcast station licensees; and (b) no other comparable site is available in the area; and (c) where the exclusive use of such site by the applicant or licensee would unduly limit the number of FM broadcast stations that can be authorized in a particular area or would unduly restrict competition among FM broadcast stations.

§ 73.240 Multiple ownership.

(a) No license for an FM broadcast station shall be granted to any party (including all parties under common control) if:

(1) Such party directly or indirectly owns, operates or controls: one or more FM broadcast stations and the grant of such license will result in any overlap of the predicted 1 mv/m contours of the existing and proposed stations, computed in accordance with § 73.313; or one or more television broadcast stations and the grant of such license will result in the predicted 1 mv/m contour of the proposed station, computed in accordance with § 73.313, encompassing the entire community of license of one of the television broadcast stations or will result in the Grade A contour(s) of the television broadcast station(s), computed in accordance with § 73.684, encompassing the entire community of license of the proposed station; or

(2) Such party, or any stockholder, officer or director of such party, directly or indirectly owns, operates, controls, or has any interest in, or is an officer or director of any other FM broadcast station if the grant of such license would result in a concentration of control of FM broadcasting in a manner inconsistent with public interest, convenience, or necessity. In determining whether there is such a concentration of control, consideration will be given to the facts of each case with particular reference to such factors as the size, extent and location of areas served, the number of people served, classes of stations involved, and the extent of other competitive service to the areas in question. The Commission, however, will in any event consider that there would be such a concentration of control contrary to the public interest, convenience or necessity for any party or any of its stockholders,

officers or directors to have a direct or indirect interest in, or be stockholders, officers, or directors of, more than seven FM broadcast stations.

(b) Paragraph (a) of this section is not applicable to non-commercial educational FM stations.

NOTE 1: The word "control" as used herein is not limited to majority stock ownership, but includes actual working control in whatever manner exercised.

NOTE 2: In applying the provisions of paragraph (a)(1) of this section, partial (as well as total) ownership interests in corporate broadcast licensees represented by ownership of voting stock of such corporations will be considered.

NOTE 3: Except as provided in Note 4 of this section, in applying the provisions of paragraphs (a)(1) and (a)(2) of this section to the stockholders of a corporation which has more than 50 voting stockholders, only those stockholders need be considered who are officers or directors or who directly or indirectly own 1 percent or more of the outstanding voting stock.

NOTE 4: In applying the provisions of paragraphs (a)(1) and (a)(2) of this section to the stockholders of a corporation which has more than 50 voting stockholders, an investment company, as defined in 15 U.S.C. Section 80a-3 (commonly called a mutual fund), need be considered only if it directly or indirectly owns 3 percent or more of the outstanding voting stock or if officers or directors of the corporation are representatives of the investment company. Holdings by investment companies under common management shall be aggregated.

NOTE 5: In calculating the percentage of ownership of voting stock under the provisions of Note 4, if an investment company directly or indirectly owns voting stock in a company which in turn directly or indirectly owns 50 percent or more of the voting stock of a corporate broadcast licensee, the investment company shall be considered to own the same percentage of outstanding shares of the corporate broadcast station licensee as it owns of the outstanding voting shares of the company standing between it and the licensee corporation. If the intermediate company owns less than 50 percent of the voting stock of a corporate broadacst station licensee, the holding of the investment company need not be considered under the 3-percent rule, but, officers or directors of the licensee corporation who are representatives of the intermediate company shall be deemed to be representatives of the investment company.

NOTE 6: In applying the provisions of paragraphs (a) and (b) of this section to the stockholders of a corporation which has more than 50 voting stockholders, a bank holding stock through its trust department in trust accounts need be considered only if such bank directly or indirectly owns 5 percent or more of the outstanding voting stock: *Provided,* The bank files a disclaimer of intent to control the management or policies of the broadcast corporation. Holdings by banks shall be aggregated if the bank has any right to determine how the stock will be voted.

NOTE 7: In cases where record and beneficial ownership of voting stock of a corporate broadcast station licensee which has more than 50 voting stockholders are not identical, e.g., bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street name for the benefit of customers, trusts holding stock as record owners for the benefit of designated parties, the party having the right to determine how the stock will be voted will be considered to own it for the purposes of these rules.

NOTE 8: Paragraph (a)(1) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities. Said paragraph will not apply to applications for assignment of license or transfer of control filed in accordance with § 1.540(b) or § 1.541(b) of this chapter, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy if no new or increased overlap would be created between commonly owned, operated, or controlled FM broadcast stations and if no new encompassment of communities proscribed in paragraph (a)(1) of this section as to commonly owned, operated, or controlled FM broadcast stations and television broadcast stations would result. Said paragraph will apply to all applications for new stations, to all other applications for assignment or transfer, and to all applications for major changes in existing stations except major changes that will result in overlap of contours of FM broadcast stations with each other no greater than that already existing. (The resulting areas of overlap of contours of FM broadcast stations with each other in such major change causes may consist partly or entirely of new terrain. However, if the population in the resulting overlap areas substantially exceeds that in the previously existing overlap areas, the Commission will not grant the application if it finds that to do so would be against the public interest, convenience, or necessity.) Paragraph (a) of this section will not apply to any application by a party who directly or indirectly owns, operates or controls a UHF television broadcast station where grant of such application would result in the Grade A contour of the UHF station encompassing the entire community of license of a commonly owned, operated, or controlled FM broadcast station or would result in the entire community of license of such UHF station being encompassed by the 1 mv/m contour of such FM broadcast station. Such community encompassment cases will be handled on a case-by-case basis in order to determine whether common ownership, operation or control of the stations in question would be in the public interest. Commonly owned, operated, or controlled FM broadcast stations with overlapping contours or community-encompassing contours prohibited by paragraph (a)(1) of this section may not be assigned or transferred to a single person, group, or entity, except as provided above in this note.

NOTE 9: Paragraph (a)(1) of this section will not be applied to cases involving television stations which are primarily "satellite" operations. Such cases will be considered on a case-by-case basis in order to determine whether common ownership, operation, or control of the stations in question would be in the public interest. Whether or not a particular television broadcast station which does not present a substantial amount of locally originated programing is primarily a "satellite" operation will be determined on the facts of the particular case. An authorized and operating "satellite" television station the Grade A contour of which completely encompasses the community of license of a commonly owned, operated, or controlled FM broadcast station, or the community of license of which is completely encompassed by the 1 mv/m contour of such an FM broadcast station may subsequently become a "non-satellite" station with local studios and locally originated programing. However, such commonly owned, operated, or controlled FM and "non-satellite" television stations may not be transferred or assigned to a single person, group, or entity except as provided in Note 7.

[28 F.R. 13623, Dec. 14, 1963, as amended at 29 F.R. 7539, June 12, 1964; 29 F.R. 13900, Oct. 8, 1964; 29 F.R. 18376, Dec. 12, 1964; 33 F.R. 9084, June 20, 1968; 36 F.R. 4289, Mar. 4, 1971; 37 F.R. 9777, May 17, 1972]

§ 73.241 Special rules relating to contracts providing for reservation of time upon sale of a station.

No license, renewal of license, assignment of license, or transfer of control of a corporate licensee shall be granted or authorized to a FM broadcast station which has a contract, arrangement or understanding, express or implied, pursuant to which, as consideration or partial consideration for the assignment of license or transfer of control, the assignor of a station license or the transferor of stock, where transfer of a corporate licensee is involved, or the nominee of such assignor or transferor retains any right of reversion of the license or any right to the reassignment of the license in the future, or reserves the right to use the facilities of the station for any period whatsoever.

§ 73.242 Duplication of AM and FM programing.

(a) After October 15, 1965, licensees of FM stations in cities of over 100,000 population (as listed in the latest regular U.S. Census Reports) shall operate so as to devote no more than 50 percent of the average FM broadcast week to programs duplicated from an AM station owned by the same licensee in the same local area. For the purposes of this paragraph, duplication is defined to mean simultaneous broadcasting of a particular program over both the AM and FM station or the broadcast of a particular FM program within 24 hours before or after the identical program is broadcast over the AM station.

(b) Compliance with the non-duplication requirement shall be evidenced by such showing in connection with renewal applications as the Commission may require.

(c) Upon a substantial showing that continued program duplication over a particular station would better serve the public interest than immediate non-duplication, a licensee may be granted a temporary exemption from the requirements of paragraph (a) of this section. Requests for such exemption must be submitted to the Commission, accompanied by supporting data, at least 6 months prior to the time the non-duplication requirement of paragraph (a) of this section is to become effective as to a particular station. Such exemption, if granted, will ordinarily run to the end of the station's current license period, or if granted near the end of the license period, for some other reasonable period not to exceed 3 years.

[29 F.R. 9500, July 11, 1964, as amended at 31 F.R. 10126, July 27, 1966]

EQUIPMENT

§ 73.250 Acceptability of broadcast transmitters for licensing.

(a) In order to facilitate the filing of, and action on applications for station authorizations, transmitters will be accepted for licensing by the Commission under one of the following conditions:

(1) A transmitter may be type-accepted upon the request of any manufacturer of transmitters built in quantity by following the type acceptance procedure set forth in Part 2 of this chapter, provided that the data and information submitted indicates that the transmitter meets the requirements of § 73.317. If accepted, such transmitter will be included on the Commission's "Radio Equipment List, Part B, Aural Broadcast Equipment". Applicants specifying transmitters included on such a list need not submit detailed descriptions and dia-

grams where the correct type number is specified, provided that the equipment proposed is identical with that accepted. Copies of this list are available for inspection at the Commission's office in Washington, D. C., and at each of its field offices.

(2) An application specifying a transmitter not included on the Radio Equipment List, Part B, may be accepted upon the request of a prospective licensee submitting with the application for construction permit a complete description of the transmitter, including the circuit diagram, listing of all tubes used, function of each, multiplication in each stage, plate current and voltage applied to each tube, a description of the oscillator circuit together with any devices installed for the purpose of frequency stabilization and the means of varying output power to compensate for power supply voltage variations. However, if this data has been filed with the Commission by a manufacturer in connection with a request for type acceptance, it need not be submitted with the application for construction permit but may be referred to as "on file". Measurement data for type acceptance made in accordance with subparagraph (1) of this paragraph shall be submitted with the license application.

(3) A transmitter shown on an instrument of authorization by manufacturer and type number, or as a composite, and which was in use prior to June 30, 1955 may continue to be used by the licensee, his successors or assignees, provided such transmitter continues to comply with the rules and regulations.

(4) A permittee may, without further authority, install a transmitter other than that specifically authorized in its construction permit if such transmitter is listed in the Commission's "Radio Equipment List, Part B, Aural Broadcast Equipment" as acceptable for the transmitter output power authorized and, if operation under § 73.295 or § 73.297 is included, such transmitter is listed in the said "Radio Equipment List" as acceptable for the appropriate type of operation.

(5) A licensee may, without further authority, install and utilize a transmitter other than that specifically authorized in its station license if the transmitter so installed and utilized is listed in the Commission's "Radio Equipment List, Part B, Aural Broadcast Equipment" as acceptable for the transmitter output power authorized and, if operation under § 73.295 or § 73.297 is included, such transmitter is listed in the said "Radio Equipment List" as acceptable for the appropriate type of operation. In the event of such a transmitter substitution, the Commission and the Engineer in Charge of the radio district in which the station is located shall be notified within three days after the date of installation of the transmitter. Such notice shall specify the manufacturer and type number of the transmitter and shall include a certification by the licensee that the transmitter as installed complies with the appropriate technical provisions of this subpart.

(b) Additional rules with respect to withdrawal of type-acceptance, modification of type-accepted equipment and limitations on the findings upon which type acceptance is based are set forth in Part 2 of this chapter.

§ 73.252 Frequency monitor.

(a) Each station shall have in operation, either at the transmitter or at the place where the transmitter is controlled, a frequency monitor of a type approved by the Commission which shall be independent of the frequency control of the transmitter.

NOTE: Approved frequency monitors are included on the Commission's "Radio Equipment List." Copies of this list are available for inspection at the Commission's office in Washington, D.C., and at each of its field offices.

(b) In the event that the frequency monitor becomes defective the station may be operated without the monitor pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission: *Provided*, That:

(1) Appropriate entries shall be made in the maintenance log of the station showing the date and time the monitor was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the monitor is found to be defective and immediately after the repaired or replacement monitor has been installed and is functioning properly.

(3) The frequency of the station shall be compared with an external frequency source of known accuracy at sufficiently frequent intervals to insure that the frequency is maintained within the toler-

ance prescribed in § 73.269. An entry shall be made in the station log as to the method used and the results thereof.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the above allowed period, informal request in accordance with § 1.549 of this chapter may be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

[28 F.R. 13623, Dec. 14, 1963, as amended at 33 F.R. 15420, Oct. 17, 1968]

§ 73.253 Modulation monitors.

(a) Each station shall have in operation, either at the transmitter or at the place where the transmitter is controlled, a modulation monitor of a type approved by the Commission for non-multiplex operation: *Provided,* That: (1) If the station is engaged in stereophonic operation as contemplated by § 73.297, the licensee shall have in operation a modulation monitor of a type approved by the Commission for monitoring stereophonic operation, and (2) if the station is engaged in operation with a Subsidiary Communications Authorization, as contemplated by § 73.295, the licensee shall have in operation a modulation monitor of a type approved by the Commission for monitoring SCA operation.

NOTE 1: Approved modulation monitors (nonmultiplex, stereophonic and SCA) are included on the Commission's "Radio Equipment List." Copies of this list are available for inspection at the Commission's office in Washington, D.C., and at its field offices.

NOTE 2: The provisions of this subpart shall become effective September 1, 1967, for stereophonic modulation monitors and January 1, 1969, for SCA modulation monitors except: (1) That the licensee of any FM broadcast station who purchased and installed a stereophonic or SCA modulation monitor, prior to July 5, 1966, which meets in part the requirements of § 73.332, may continue to use such monitor until January 1, 1972; and (2) stations which have type-approved SCA modulation monitors on order before January 1, 1969, must have such monitors in operation by April 1, 1969.

(b) In the event that the modulation monitor becomes defective the station may be operated without the monitor pending its repair or replacement for a period not in excess of 60 days without further authority o fthe Commission: *Provided,* That:

(1) Appropriate entries shall be made in the maintenance log of the station showing the date and time the monitor was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the monitor is found to be defective and immediately after the repaired or replacement monitor has been installed and is functioning properly.

(3) During the period when the station is operated without the modulation monitor the licensee shall provide other suitable means for insuring that the modulation is maintained within the tolerance prescribed in § 73.268.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the above allowed period, informal request in accordance with § 1.549 of this chapter may be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

[28 F.R. 13623, Dec. 14, 1963, as amended at 31 F.R. 7907, June 3, 1966; 33 F.R. 15420, Oct. 17, 1968; 33 F.R. 19016, Dec. 20, 1968]

§ 73.254 Required transmitter performance.

(a) The construction, installation, operation and performance of the FM broadcast transmitting system shall be in accordance with § 73.317.

(b) The licensee of each FM broadcast station shall make equipment performance measurements at least once each calendar year: *Provided, however,* That the dates of completion of successive sets of measurements shall be no more than 14 months apart. One set of measurements shall be made during the 4 month period preceding the filing date of the application for renewal of station license. Equipment performance measurements for auxiliary transmitters are not required. Equipment performance measurements shall be made with equipment adjusted for normal program operation and shall include all circuits between the main studio microphone terminals and the antenna circuit, including telephone lines, preemphasis circuits and any equalizers employed, except for microphones, and without compression if a compression amplifier is installed. The measurement program shall yield the following information:

(1) Audio frequency response from 50 to 15,000 cycles for approximately 25, 50

and 100 percent modulation. Measurements shall be made on at least the following audio frequencies: 50, 100, 400, 1000, 5000, 10,000 and 15,000 cycles. The frequency response measurements should normally be made without deemphasis; however, standard 75 microsecond deemphasis may be employed in the measuring equipment or system provided the accuracy of the deemphasis circuit is sufficient to insure that the measured response is within the prescribed limits.

(2) Audio frequency harmonic distortion for 25, 50 and 100 percent modulation for the fundamental frequencies of 50, 100, 400, 1000, and 5000 cycles. Audio frequency harmonics for 100 percent modulation for fundamental frequencies of 10,000 and 15,000 cycles. Measurements shall normally include harmonics to 30,000 cycles. The distortion measurements shall be made employing 75 microsecond deemphasis in the measuring equipment or system.

(3) Output noise level (frequency modulation) in the band of 50 to 15,000 cycles in decibels below the audio frequency level representing a frequency swing of 75 kilocycles. The noise measurements shall be made employing 75 microsecond deemphasis in the measuring equipment or system.

(4) Output noise level (amplitude modulation) in the band of 50 to 15,000 c/s in db below the level representing 100 percent amplitude modulation. The noise measurements shall be made employing 75 microsecond de-emphasis in the measuring equipment or system.

(c) The data required by paragraph (b) of this section together with a description of instruments and procedure signed by the engineer making the measurements shall be kept on file at the transmitter and retained for a period of two years and shall be made available during that time upon request to any duly authorized representative of the Federal Communications Commission.

[28 F.R. 13623, Dec. 14, 1963, as amended at 33 F.R. 11541, Aug. 14, 1968; 35 F.R. 3758, Feb. 26, 1970]

§ 73.255 Auxiliary transmitter.

Upon showing that a need exists for the use of an auxiliary transmitter in addition to the regular transmitter of an FM broadcast station, a license therefor may be issued: *Provided*, That:

(a) An auxiliary transmitter may be installed either at the same location as the main transmitter or at another location.

(b) A licensed operator shall be in control whenever an auxiliary transmitter is placed in operation.

(c) The auxiliary transmitter shall be maintained so that it may be put into immediate operation at any time for the following purposes:

(1) The transmission of the regular programs upon the failure of the main transmitter.

(2) The transmission of regular programs during maintenance or modification work on the main transmitter, necessitating discontinuance of its operation for a period not to exceed 5 days. (This includes the equipment changes which may be made without authority as set forth elsewhere in the rules and regulations or as authorized by the Commission by letter or by construction permit. Where such operation is required for periods in excess of 5 days, request therefor shall be in accordance with § 1.542 of this chapter.)

(3) Upon request by a duly authorized representative of the Commission.

(d) The auxiliary transmitter shall be tested at least once each week to determine that it is in proper operating condition and that it is adjusted to the proper frequency, except that in the case of operation in accordance with paragraph (c) of this section during any week, the test in that week may be omitted provided the operation under paragraph (c) of this section is satisfactory. Tests shall be conducted only between midnight and 6 a.m., local time. A record shall be kept of the time and result of each test. Such records shall be retained for a period of 2 years.

(e) The auxiliary transmitter shall be equipped with satisfactory control equipment which will enable the maintenance of the frequency emitted by the station within the limits prescribed by the regulations in this part.

(f) The operating power of an auxiliary transmitter may be less than the authorized power of the main transmitter, but in no event shall it be greater than such power.

[28 F.R. 13623, Dec. 14, 1963, as amended at 33 F.R. 15420, Oct. 17, 1968]

§ 73.256 Alternate main transmitters.

The licensee of an FM broadcast station may be licensed for alternate main transmitters provided that a technical need for such alternate transmitters is shown (such as licensees maintaining 24-hour schedule and needing alternate operation for maintenance, or where developmental work requires alternate operation) and that the following conditions are met:

(a) Both transmitters are located at the same place.

(b) Both transmitters shall have the same power rating.

(c) Both transmitters shall meet the construction, installation, operation, and performance requirements of § 73.317.

§ 73.257 Changes in equipment and antenna system.

Licensees of FM broadcast stations shall observe the following provisions with regard to changes in equipment and antenna system:

(a) No changes in equipment shall be made:

(1) That would result in the emission of signals outside of the authorized channel.

(2) That would result in the external performance of the transmitter being in disagreement with that prescribed in § 73.317.

(b) Specific authority, upon filing formal application (FCC Form 301) therefor, is required for a change in service area or for any of the following changes:

(1) Changes involving an increase or decrease in the power rating of the transmitter.

(2) A replacement of the transmitter as a whole, unless such transmitter is one which may be installed and utilized in accordance with the provisions of § 73.250(a)(5).

(3) Change in the location of the transmitting antenna.

(4) Change in antenna system, including transmission line.

(5) [Reserved]

(6) Change in the power delivered to the antenna.

(7) Change in frequency control and/or modulation system.

(c) Other changes, except as above provided for in this section or in the Technical Standards of this subpart, may be made at any time without the authority of the Commission: *Provided*, That the Commission shall be promptly notified thereof and such changes shall be shown in the next application for renewal of license.

[28 F.R. 13623, Dec. 14, 1963, as amended at 29 F.R. 1329, Jan. 25, 1964; 32 F.R. 11797, Aug. 16, 1967; 36 F.R. 3266, Feb. 20, 1971]

§ 73.258 Indicating instruments.

(a) Each FM broadcast station shall be equipped with indicating instruments, which conform with the specifications set forth in § 73.320, for measuring the direct plate voltage and current of the last radio stage and the transmission line radio frequency current, voltage or power.

(b) In the event that any one of these indicating instruments becomes defective when no substitute which conforms with the required specifications is available, the station may be operated without the defective instrument pending its repair or replacement for a period not in excess of 60 days: *Provided*, That:

(1) Appropriate entries shall be made in the maintenance log of the station showing the date and time the meter was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified immediately after the instrument is found to be defective and immediately after the repaired or replaced instrument has been installed and functioning properly.

(3) If the defective instrument is a plate voltmeter or plate ammeter in the last radio stage, the operating power shall be maintained by means of the radio frequency transmission line meter.

(c) If conditions beyond the control of the licensee prevent the restoration of the meter to service within the above allowed period, informal request may be filed in accordance with § 1.549 of this chapter with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

TECHNICAL OPERATION AND OPERATORS

§ 73.261 Time of operation.

(a) All FM broadcast stations will be licensed for unlimited time operation. All FM stations are required to maintain an operating schedule of not less than 8 hours between 6 a.m. and 6 p.m., local time, and not less than 4 hours between 6 p.m. and midnight, local time, each day of the week except Sunday.

(b) In the event that causes beyond a licensee's control make it impossible to adhere to the operating schedule in paragraph (a) of this section or to continue operating, the station may limit or discontinue operation for a period of not more than 10 days, without further authority of the Commission. However, the Commission and the Engineer in Charge of the radio district in which the station is located shall be immediately notified in writing if the station is unable to maintain the minimum operating schedule and shall be subsequently notified when the station resumes regular operation.

[28 F.R. 13651, Dec. 14, 1963, as amended at 37 F.R. 4340, Mar. 2, 1972]

§ 73.262 Experimental operation.

(a) The period between 12 midnight and 6 a.m., prevailing local time, may be used for experimental purposes in testing and maintaining apparatus by the licensee of any FM broadcast station on its assigned frequency and not in excess of its authorized power, without specific authorization from the Commission.

(b) FM broadcast stations may (with prior notification to the Commission and the Engineer in Charge of the radio district in which the station is located) test, maintain, and adjust the apparatus at the station during other time periods; and may (upon informal application) conduct technical experimentation directed to the improvement of technical phases of operation during other time periods, and for such purposes may utilize a signal other than the standard FM signal, subject to the following conditions:

(1) That the licensee complies with the provisions of § 73.261 with regard to the minimum number of hours of operation.

(2) That emissions outside the authorized bandwidth shall comply with § 73.317(a) and that no interference is caused to the transmissions of other FM broadcast stations.

(3) No charges either direct or indirect shall be made by the licensee of an FM broadcast station for the production or transmission of programs when conducting technical experimentation.

[32 F.R. 19188, Dec. 20, 1967]

§ 73.263 Station inspection.

The licensee of any FM broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 73.264 Station and operator licenses; posting of.

(a) The station license and any other instrument of station authorization shall be posted in a conspicuous place and in such manner that all terms are visible, at the place the licensee considers to be the principal control point of the transmitter. At all other control points listed on the station authorization, a photocopy of the station license and other instruments of station authorization shall be posted.

(b) The original operator license, or FCC Form 759, of each station operator shall be posted at the place where he is on duty as an operator.

§ 73.265 Operator requirements.

(a) One or more operators holding a radio operator license or permit of a grade specified in this section shall be in actual charge of the transmitting system, and shall be on duty either at the transmitter location or at the remote control point. If operation by remote control has not been authorized, the transmitter, required monitors, and other required metering equipment shall be readily accessible, clearly visible, and located sufficiently close to the operator at the normal operating position that deviations from normal indications of required instruments can be observed readily. If operation by remote control is authorized, the required controls and instruments shall be readily accessible, clearly visible, and located sufficiently close to the operator at the normal operating position that deviations from normal indications of required instruments can be observed readily.

(b) With the exceptions set forth in paragraph (g) of this section, adjustments of the transmitting system and inspection, maintenance, and required equipment performance measurements shall be performed only by a first-class radiotelephone operator.

(c) A station with authorized transmitter output power of 25 kilowatts or less shall have at least one first-class radiotelephone operator readily available at all times, either in full-time employment, or, in the alternative, the licensee may contract in writing for the services on a part-time basis of one or more such operators. Signed contracts with part-time operators shall be kept in the files of the station and shall be made available for inspection upon request by an authorized representative of the Commission. A signed copy of contracts shall be forwarded to the engineer in charge of the radio district in which the station is located within three (3) days after the contract is signed.

(d) A station with authorized transmitter output power in excess of 25 kilowatts may employ first-class radiotelephone operators, second-class operators, or operators with the third-class permits endorsed for broadcast station operation for routine operation of the transmitting system if the station has in full-time employment at least one first-class radiotelephone operator and complies with the provisions of paragraph (e) of this section and the following:

(1) The station licensee shall designate one first-class radiotelephone operator as the chief operator, who, together with the licensee, shall be responsible for the technical operation of the station. The station licensee shall notify the engineer in charge of the radio district in which the station is located of the name and license number of the designated chief operator. Such notification shall be by letter within three (3) days of such designation. A copy of the notification shall be posted with the chief operator's license.

(2) An operator designated as chief operator for one station may not be so designated concurrently at any other FM broadcast station.

(3) The station licensee shall vest such authority in, and afford such facilities to the chief operator as may be necessary to insure that the chief operator's primary responsibility for the proper technical operation of the station may be discharged efficiently.

(4) At such times as a regularly designated chief operator is unavailable or unable to act as chief operator (e.g., vacations, sickness), the station licensee shall designate another first-class radiotelephone operator as acting chief operator on a temporary basis. Within 3 days of the date such action is taken, the engineer in charge of the radio district in which the station is located shall be notified by the licensee by letter of the name and license number of the acting chief operator, and shall be notified by letter, again within 3 days of the date when the regularly designated chief operator returns to duty.

(5) The designated chief operator may serve as a routine duty transmitter operator at any station only to the extent that it does not interfere with the efficient discharge of his responsibilities as listed below.

(i) The inspection and maintenance of the transmitting system, including the antenna system and required monitoring equipment.

(ii) The accuracy and completeness of entries in the maintenance log.

(iii) The supervision and instruction of all other station operators in the performance of their technical duties.

(iv) A review of completed operating logs to determine whether technical operation of the station has been in accordance with the rules and terms of the station authorization. After review, the chief operator shall sign the log and indicate the date of such review. If the review of the operating logs indicates technical operation of the station is in violation of the rules or terms of the station authorization, he shall promptly initiate corrective action. The review of each day's operating logs shall be made within 24 hours, except that, if the chief operator is not on duty during a given 24-hour period, the logs must be reviewed within 2 hours after his next appearance for duty. In any case, the time before review cannot exceed 72 hours.

(e) Subject to the conditions set forth in paragraphs (c) and (d) of this section, routine operation of the transmitting system may be performed by an operator holding a second-class license or third-class permit endorsed for broadcast station operation. Unless, however, performed under the immediate and personal supervision of an operator holding a first-class radiotelephone license, an operator holding a second-class license or third-class permit endorsed for broadcast station operation, may make adjustments only of external controls, as follows:

(1) Those necessary to turn the transmitter on and off;

(2) Those necessary to compensate for voltage fluctuations in the primary power supply;

(3) Those necessary to maintain modulation levels of the transmitter within the prescribed limits.

(f) It is the responsibility of the station licensee to insure that each operator is fully instructed in the performance of all of the above adjustments as well as in other required duties, such as reading meters and making log entries. Printed step-by-step instructions for those adjustments which the lesser grade operator is permitted to make, and a tabulation or chart of upper and lower limiting values of parameters required to be observed and logged, shall be posted at the operating position. The emissions of the station shall be terminated immediately whenever the transmitting system is observed operating beyond the posted parameters, or in any other manner inconsistent with the rules or the station authorization and the above adjustments are ineffective in correcting the condition of improper operation and a first-class radiotelephone operator is not present.

(g) The operator on duty at the transmitter site or remote control point, may, at the discretion of the licensee and the chief operator, if any, be employed for other duties or for the operation of another radio station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such other stations: *Provided, however,* That such other duties shall not interfere with the proper operation of the transmitting system and keeping of required logs.

(h) At all FM broadcast stations, a complete inspection of the transmitting system and required monitoring equipment in use shall be made by an operator holding a first-class radiotelephone license at least once each day, 5 days a week, with an interval of not less than 12 hours between successive inspections. This inspection shall include such tests, adjustments, and repairs as may be necessary to insure operation in conformance with the provisions of this subpart and the current station authorization.

[37 F.R. 11546, June 8, 1972]

§ 73.266 Facsimile broadcasting and multiplex transmission.

(a) FM broadcast stations may transmit simplex facsimile in accordance with transmission standards set forth in § 73.318 during periods not devoted to FM aural broadcasting. Such transmissions may not exceed one hour during the period between 7 a.m. and midnight (no limit for the hours between midnight and 7 a.m.) and may not be counted toward the minimum operation required by § 73.261. The Commission shall be notified by the licensee of the FM broadcast station of its intent to transmit such facsimile.

(b) FM broadcast stations may, upon securing authorization from the Commission, transmit multiplex facsimile in accordance with transmission standards set forth in § 73.318: *Provided,* That the transmission of such facsimile does not reduce the quality of aural programs simultaneously transmitted by the licensee below that required by the Technical Standards of this subpart and that no degradation of such aural programs will result from such facsimile transmissions when received on FM receivers not equipped with filter or other additional equipment.

§ 73.267 Operating power; determination and maintenance of.

(a) *Determination.* The operating power of each station shall be determined by either the direct or indirect method.

(1) Using the direct method, the power shall be measured at the output terminals of the transmitter while operating into a dummy load of substantially zero reactance and a resistance equal to the transmission line characteristic impedance. The transmitter shall be unmodulated during this measurement. If electrical devices are used to determine the power output, such devices shall permit determination of this power to within an accuracy of ±5 percent of the power indicated by the full scale reading of the electrical indicating instrument of the device. If temperature and coolant flow indicating devices are used to determine the power output, such devices shall permit determination of this power to within an accuracy of 4 percent of measured average power output. During this measurement the direct plate voltage and current of the last radio stage and the transmission line meter shall be read and compared with similar readings taken with the dummy load replaced by the antenna. These readings shall be in substantial agreement.

(2) Using the indirect method, the operating power is the product of the plate voltage (E_p) and the plate current (I_p) of the last radio stage, and an efficiency factor, F, as follows:

$$\text{Operating power} = E_p \times I_p \times F$$

(3) The efficiency factor, *F*, shall be established by the transmitter manufacturer for each type of transmitter for which he submits data to the Commission, over the entire operating range of powers for which the transmitter is designed, and shall be shown in the instruction books supplied to the customer with each transmitter. In the case of composite equipment, the factor *F* shall be furnished to the Commission with a statement of the basis used in determining such factor.

(b) *Maintenance.* (1) The operating power shall be maintained as near as practicable to the authorized power and shall not be less than 90 percent nor greater than 105 percent of authorized power except as indicated in paragraph (c) of this section.

(2) When determined by the direct method, the operating power of the transmitter shall be monitored by a transmission line meter which reads proportional to the voltage, current, or power at the output terminals of the transmitter, the meter to be calibrated at intervals not exceeding 6 months. The calibration shall cover, as a minimum, the range from 90 to 105 percent of authorized power and the meter shall provide clear indications which will permit maintaining the operating power within the prescribed tolerance or the meter shall be calibrated to read directly in power units.

(c) *Reduced power.* In the event it becomes technically impossible to operate with authorized power, the station may be operated with reduced power for a period of 10 days or less without further authority of the Commission: *Provided*, That the Commission and the Engineer in Charge of the radio district in which the station is located shall be immediately notified in writing if the station is unable to maintain the minimum operating schedule (specified in § 73.261) with authorized power and shall be subsequently notified upon resumption of operation with authorized power.

§ 73.268 Modulation.

The percentage of modulation shall be maintained as high as possible consistent with good quality of transmission and good broadcast practice. In no case is it to exceed 100 percent on peaks of frequent recurrence. Generally, it should not be less than 85 percent on peaks of frequent recurrence; but where necessary to avoid objectionable loudness modulation may be reduced to whatever level is necessary, even if the resulting modulation is substantially less than 85 percent on peaks of frequent recurrence.

[30 F.R. 8967, July 16, 1965]

§ 73.269 Frequency tolerance.

The center frequency of each FM broadcast station shall be maintained within 2000 cycles per second of the assigned center frequency.

[33 F.R. 15421, Oct. 17, 1968]

§ 73.270 Antenna structure, marking and lighting.

The provisions of Part 17 of this chapter (Construction, Marking, and Lighting of Antenna Structures) require that certain antenna structures be painted and/or lighted in accordance with the provisions of that part. Where the antenna structure of a facility authorized under this subpart is required to be painted or lighted, see §§ 17.47 through 17.53 of this chapter.

[33 F.R. 15421, Oct. 17, 1968]

§ 73.271 Discontinuance of operation.

The licensee of each station shall notify the Commission in Washington, D.C., and the Engineer in Charge of the radio district where such station is located of permanent discontinuance of operation at least two days before operation is discontinued. The licensee shall, in addition, immediately forward the station license and other instruments of authorization to the Washington, D.C., office of the Commission for cancellation.

§ 73.273 Emergency antenna.

In the event it becomes impossible to operate with the regularly authorized antenna, the station may, without further authority, be operated with an emergency antenna for a period of 10 days or less pending necessary repairs: *Provided*, That the Commission and the Engineer in Charge of the radio district in which the station is located shall be notified in writing immediately upon the beginning of such operation and upon the resumption of normal operation.

§ 73.274 Remote control authorization.

(a) An application to operate a station by remote control, to add a remote control point, or to change the location of a remote control point shall be made on FCC Form 301-A, except that:

(1) A request to operate a new station by remote control may be included in the application (FCC Form 301) for construction permit or modification of construction permit.

(2) A request to change a remote control point to a new studio location beyond the corporate limits of the community to which the station is assigned and at a point other than the authorized transmitter site may be included in the application (FCC Form 301) for authority to change the main studio location.

(3) No application need be filed to change a remote control point to an authorized main studio location within the corporate limits of the community to which the station is assigned or to its authorized transmitter site, or to delete a remote control point. However, any such change shall be reported to the Commission and to the Engineer in Charge of the radio district in which the station is located.

(b) An authorization for remote control will be issued only after a satisfactory showing has been made, including, among other things, the location of the remote control point(s).

[32 F.R. 11797, Aug. 16, 1967]

§ 73.275 Remote control operation.

(a) Operation by remote control shall be subject to the following conditions:

(1) The equipment at the operating and transmitting positions shall be so installed and protected that it is not accessible to or capable of operation by persons other than those duly authorized by the licensee.

(2) The control circuits from the operating position to the transmitter shall provide positive on and off control and shall be such that open circuits, short circuits, grounds or other line faults will not actuate the transmitter and any fault causing loss of such control will automatically place the transmitter in an inoperative position.

(3) A malfunction of any part of the remote control equipment and associated line circuits resulting in improper control or inaccurate meter readings shall be the cause for the immediate cessation of operation by remote control.

(4) Control and monitoring equipment shall be installed so as to allow the licensed operator at the remote control point to perform all the functions in a manner required by the provisions of this part.

(b) All stations, whether operating by remote control or direct control, shall be equipped so as to be able to follow the Emergency Action Notification procedures described in § 73.932.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318) [28 F.R. 13623, Dec. 14, 1963, as amended at 33 F.R. 15421, Oct. 17, 1968]

§ 73.276 Permissible transmissions.

(a) No FM broadcast licensee or permittee shall enter into any agreement, arrangement or understanding, oral or written, whereby it undertakes to supply, or receives consideration for supplying, on its main channel a functional music, background music, or other subscription service (including storecasting) for reception in the place or places of business of any subscriber.

(b) The transmission (or interruption) of radio energy in the FM broadcast band is permissible only pursuant to a station license, program test authorization, Subsidiary Communications Authorization (SCA) or other specific authority therefor.

[29 F.R. 7471, June 10, 1964]

OTHER OPERATING REQUIREMENTS

§ 73.281 General requirements relating to logs.

(a) The licensee or permittee of each FM broadcast station shall maintain program, operating, and maintenance logs as set forth in §§ 73.282, 73.283, and 73.284. Each log shall be kept by the station employee or employees (or contract operator) competent to do so, having actual knowledge of the facts required, who in the case of program and operating logs shall sign the appropriate log when starting duty, and again when going off duty.

(b) The logs shall be kept in an orderly and legible manner, in suitable form, and in such detail that the data required for the particular class of station concerned is readily available. Key letters or abbreviations may be used if proper meaning or explanation is contained elsewhere in the log. Each sheet shall be numbered and dated. Time entries shall be made in local time.

(c) No log or preprinted log or schedule which upon completion becomes a log, or portion thereof, shall be erased, obliterated, or willfully destroyed within the period of retention provided by the provisions of this part. Any necessary correction shall be made only pursuant to §§ 73.282, 73.283 and 73.284, and only by striking out the erroneous portion, or by making a corrective explanation on the log, or attachment to it as provided in those sections.

(d) Entries shall be made in the logs as required by §§ 73.282, 73.283, and 73.284. Additional information such as that needed for billing purposes or for the cuing of automatic equipment may be entered on the logs. Such additional information, so entered, shall not be subject to the restrictions and limitations in the Commission's rules on the making of corrections and changes in logs.

[28 F.R. 13623, Dec. 14, 1963, as amended at 31 F.R. 751, Jan. 20, 1966; 33 F.R. 4412, Mar. 12, 1968]

§ 73.282 Program log.

(a) The following entries shall be made in the program log:

(1) *For each program.* (i) An entry identifying the program by name or title.

(ii) An entry of the time each program begins and ends. If programs are broadcast during which separately identifiable program units of a different type or source are presented, and if the licensee wishes to count such units separately, the beginning and ending time for the longer program need be entered only once for the entire program. The program units which the licensee wishes to count separately shall then be entered underneath the entry for a longer program, with the beginning and ending time of each unit, and with the entry indented or otherwise distinguished so as to make it clear that the program unit referred to was broadcast within the longer program.

(iii) An entry classifying each program as to type, using the definitions set forth in NOTE 1 at the end of this section.

(iv) An entry classifying each program as to source, using the definitions set forth in NOTE 2 at the end of this section. (For network programs, also give name or initials of network, e.g., ABC, CBS, NBC, Mutual.)

(v) An entry for each program presenting a political candidate, showing the name and political affiliation of such candidate.

(2) *For commercial matter.* (i) An entry identifying (*a*) the sponsor(s) of the program; (*b*) the person(s) who paid for the announcement, or (*c*) the person(s) who furnished materials or services referred to in § 73.289(d). If the title of a sponsored program includes the name of the sponsor, e.g., XYZ News, a separate entry for the sponsor is not required.

(ii) An entry or entries showing the total duration of commercial matter in each hourly time segment (beginning on the hour) or the duration of each commercial message (commercial continuity in sponsored programs, or commercial announcements) in each hour. See Note 5 at the end of this section for statement as to computation of commercial time.

(iii) An entry showing that the appropriate announcement(s) (sponsorship, furnishing material or services, etc.) have been made as required by section 317 of the Communications Act and § 73.289. A checkmark (√) will suffice but shall be made in such a way as to indicate the matter to which it relates.

(3) *For public service announcements.* (i) An entry showing that a public service announcement (PSA) has been broadcast together with the name of the organization or interest on whose behalf it is made. See Note 4 following this section for definition of a public service announcement.

(4) *For other announcements.* (i) An entry of the time that each required station identification announcement is made (call letters and licensed location; see § 73.287).

(ii) An entry for each announcement presenting a political candidate, showing the name and political affiliation of such candidate.

(iii) An entry for each announcement made pursuant to the local notice requirements of §§ 1.580 (pre-grant) and 1.594 (designation for hearing) of this chapter, showing the time it was broadcast.

(iv) An entry showing that a mechanical reproduction announcement has been made in accordance with the provisions of § 73.288.

(b) Program log entries may be made either at the time of or prior to broadcast. A station broadcasting the programs of a national network which will supply it with all information as to such programs, commercial matter and other announcements for the composite week need not log such data but shall record in its log the time when it joined the network, the name of each network program broadcast, the time it leaves the network, and any nonnetwork matter broadcast required to be logged. The information supplied by the network, for the composite week which the station will use in its renewal application, shall be retained with the program logs and associated with the log pages to which it relates.

(c) No provision of this section shall be construed as prohibiting the recording or other automatic maintenance of data required for program logs. However, where such automatic logging is used, the licensee must comply with the following requirements:

(1) The licensee, whether employing manual or automatic logging or a combination thereof, must be able accurately to furnish the Commission with all information required to be logged;

(2) Each recording, tape, or other means employed shall be accompanied by a certificate of the operator or other responsible person on duty at the time or other duly authorized agent of the licensee, to the effect that it accurately reflects what was actually broadcast. Any information required to be logged which cannot be incorporated in the automatic process shall be maintained in a separate record which shall similarly be authenticated;

(3) The licensee shall extract any required information from the recording for the days specified by the Commission or its duly authorized representative and submit it in written log form, together with the underlying recording, tape, or other means employed.

(d) Program logs shall be changed or corrected only in the manner prescribed in § 73.281(c) and only in accordance with the following:

(1) *Manually kept log.* Where, in any program log, or preprinted program log, or program schedule which upon completion is used as a program log, a correction is made before the person keeping the log has signed the log upon going off duty, such correction, no matter by whom made, shall be initialed by the person keeping the log prior to his signing of the log when going off duty, as attesting to the fact that the log as corrected is an accurate representation of what was broadcast. If corrections or additions are made on the log after it has been so signed, explanation must be made on the log or on an attachment to it, dated and signed by either the person who kept the log, the station program director or manager, or an officer of the licensee.

NOTE 1. *Program type definitions.* The definitions of the first eight types of programs (a) through (h) are intended not to overlap each other and will normally include all the various programs broadcast. Definitions (i) through (k) are subcategories and the programs classified thereunder will also be classified under one of the appropriate first eight types. There may also be further duplication within types (i) through (k); (e.g., a program presenting a candidate for public office, prepared by an educational institution, would be classified as Public Affairs (PA), Political (POL), and Educational Institution (ED).

(a) Agricultural programs (A) include market reports, farming or other information specifically addressed, or primarily of interest, to the agricultural population.

(b) Entertainment programs (E) include all programs intended primarily as entertainment, such as music, drama, variety, comedy, quiz, etc.

(c) News programs (N) include reports dealing with current local, national, and international events, including weather and stock market reports; and when an integral part of a news program, commentary, analysis, and sports news.

(d) Public affairs programs (PA) include talks, commentaries, discussions, speeches, editorials, political programs, documentaries, forums, panels, round tables, and similar programs primarily concerning local, national, and international public affairs.

(e) Religious programs (R) include sermons or devotionals; religious news; and music, drama, and other types of programs designed primarily for religious purposes.

(f) Instructional programs (I) include programs (other than those classified under Agricultural, News, Public Affairs, Religious, or Sports) involving the discussion of, or primarily designed to further an appreciation or understanding of, literature, music, fine arts, history, geography, and the natural and social sciences; and programs devoted to occupational and vocational instruction, instruction with respect to hobbies, and similar programs intended primarily to instruct.

(g) Sports programs (S) include play-by-play and pre- or post-game related activities and separate programs of sports instruction, news or information (e.g., fishing opportunities, golfing instructions, etc.).

(h) Other programs (O) include all programs not falling within definitions (a) through (g).

(i) Editorials (EDIT) include programs presented for the purpose of stating opinions of the licensee.

(j) Political programs (POL) include those which present candidates for public office or which give expressions (other than in station editorials) to views on such candidates or on issues subject to public ballot.

(k) Educational Institution programs (ED) include any program prepared by, in behalf of, or in cooperation with, educational institutions, educational organizations, libraries, museums, PTA's, or similar organizations. Sports programs shall not be included.

NOTE 2. *Program source definitions.* (a) A local program (L) is any program originated or produced by the station, or for the production of which the station is primarily responsible, employing live talent more than 50 percent of the time. Such a program, taped or recorded for later broadcast, shall be classified as local. A local program fed to a network shall be classified by the originating station as local. All nonnetwork news programs may be classified as local. Programs primarily featuring records or transcriptions shall be classified as recorded (REC) even though a station announcer appears in connection with such material. However, identifiable units of such programs which are live and separately logged as such may be classified as local. (E.g., if during the course of a program featuring records or transcriptions a nonnetwork 2-minute news report is given and logged as a news program, the report may be classified as local.)

(b) A network program (NET) is any program furnished to the station by a network (national, regional or special). Delayed broadcasts of programs originated by networks are classified as networks.

(c) A recorded program (REC) is any program not otherwise defined in this Note including, without limitation, those using recordings, transcriptions, or tapes.

NOTE 3. *Definition of commercial matter* (CM) includes commercial continuity (network and nonnetwork) and commercial announcements (network and nonnetwork) as follows: (Distinction between continuity and announcements is made only for definition purposes. There is no need to distinguish between the two types of commercial matters when logging.

(a) Commercial continuity (CC) is the advertising message of a program sponsor.

(b) A commercial announcement (CA) is any other advertising message for which a charge is made, or other consideration is received.

(1) Included are (i) "bonus spots"; (ii) trade-out spots, and (iii) promotional announcements of a future program where consideration is received for such an announcement or where such announcement identifies the sponsor of a future program beyond mention of the sponsor's name as an integral part of the title of the program. (E.g., where the agreement for the sale of time provides that the sponsor will receive promotional announcements, or when the promotional announcement contains a statement such as "Listen tomorrow for the—[name of program]—brought to you by—[sponsor's name]—.")

(2) Other announcements including but not limited to the following are not commercial announcements:

(i) Promotional announcements, except as heretofore defined in paragraph (b).

(ii) Station identification announcements for which no charge is made.

(iii) Mechanical reproduction announcements.

(iv) Public service announcements.

(v) Announcements made pursuant to § 73.289(d) that materials or services have been furnished as an inducement to broadcast a political program or a program involving the discussion of controversial public issues.

(vi) Announcements made pursuant to the local notice requirements of §§ 1.580 (pregrant) and 1.594 (designation for hearing) of this chapter.

NOTE 4. *Definition of a public service announcement.* A public service announcement is an announcement for which no charge is made and which promotes programs, activities, or services of Federal, State, or local governments (e.g., recruiting, sales of bonds, etc.) or the programs, activities or services of nonprofit organizations (e.g., UGF, Red Cross Blood Donations, etc.), and other announcements regarded as serving community interests, excluding time signals, routine weather announcements and promotional announcements.

NOTE 5. *Computation of commercial time.* Duration of commercial matter shall be as close an approximation to the time consumed as possible. The amount of commercial time scheduled will usually be sufficient. It is not necessary, for example, to correct an entry of a 1-minute commercial to accommodate varying reading speeds even though the actual time consumed might be a few seconds more or less than the scheduled time. However, it is incumbent upon the licensee to ensure that the entry represents as close an approximation of the time actually consumed as possible.

[30 F.R. 10200, Aug. 17, 1965, as amended at 31 F.R. 751, Jan. 20, 1966; 33 F.R. 4740, Mar. 20, 1968; 33 F.R. 15421, Oct. 17, 1968]

§ 73.283 Operating log.

(a) The following entries shall be made in the operating log by the properly licensed operator in actual charge of the transmitting apparatus only:

(1) An entry of the time the station begins to supply power to the antenna and the time it stops.

(2) An entry of each interruption of the carrier wave, where restoration is not automatic, its cause and duration followed by the signature of the person restoring operation (if licensed operator other than the licensed operator on duty).

(3) An entry, at the beginning of operation and at intervals not exceeding one-half hour, of the following (actual readings observed prior to making any adjustments to the equipment) and, when appropriate, an indication of corrections made to restore parameters to normal operating values:

(i) Operating constants of last radio stage (total plate voltage and plate current).

(ii) RF transmission line meter reading.

(iii) Frequency monitor reading.

(4) Any other entries required by the instrument of authorization or the provisions of this part.

(5) The entries required by § 17.49 (a), (b), and (c) of this chapter concerning daily observations of tower lights.

(6) An entry, where applicable, describing the results obtained in determining the pilot subcarrier frequency for stereophonic broadcasting.

(b) Automatic devices accurately calibrated and with appropriate time, date and circuit functions may be utilized to record the entries in the operating log: *Provided*, That:

(1) They do not effect the operation of circuits or accuracy of indicating instruments of the equipment being recorded;

(2) The recording devices have an accuracy equivalent to the accuracy of the indicating instruments;

(3) The calibration is checked against the original indicators at least once a week and the results noted in the maintenance log;

(4) Provision is made to actuate automatically an aural alarm circuit located near the operator on duty if any of the automatic log readings are not within the tolerances or other requirements specified in the rules or instrument of authorization;

(5) Unless the alarm circuit operates continuously, devices which record each parameter in sequence must read each parameter at least once during each 10-minute period and clearly indicate the parameter being recorded;

(6) The automatic logging equipment is located at the remote control point if the transmitter is remotely controlled or at the transmitter location if the transmitter is manually controlled;

(7) The automatic logging equipment is located in the near vicinity of the operator on duty and inspected by him periodically during the broadcast day; and

(8) The indicating equipment conforms to the requirements of § 73.320 except that the scales need not exceed 2 inches in length. Arbitrary scales may not be used.

(c) In preparing the operating log, original data may be recorded in rough form and later transcribed into the log, but in such a case all portions of the original memoranda shall be preserved as a part of the complete log.

(d) Operating logs shall be changed or corrected only in the manner prescribed in § 73.281(c) and only in accordance with the following:

(1) *Manually kept log*. Any necessary corrections in a manually kept operating log shall be made only by the person making the original entry who shall make and initial each correction prior to signing the log when going off duty in accordance with § 73.281(a). If corrections or additions are made on the log after it has been so signed, explanation must be made on the log or on an attachment to it, dated and signed by either the operator who kept the log, the station technical supervisor or an officer of the licensee.

(2) *Automatic logging*. No automatically kept operating log shall be altered in any way after entries have been recorded. Any errors or omissions found in an automatically kept operating log shall be noted and explained in a memorandum signed by the operator on duty (who, under the provisions of paragraph (b)(7) of this section, is required to inspect the automatic equipment) or by the station technical supervisor or an officer of the licensee. Such memorandum shall be affixed to the original log in question.

(e) If required by § 73.265(d)(5)(iv), each completed operating log shall bear a signed and dated notation by the station's chief operator of the results of the review of that log.

[28 F.R. 13623, Dec. 14, 1963, as amended at 31 F.R. 751, Jan. 20, 1966; 31 F.R. 7907, June 3, 1966; 33 F.R. 19821, Dec. 27, 1968; 37 F.R. 11547, June 8, 1972]

§ 73.284 Maintenance log.

(a) The following entries shall be made in the maintenance log:

(1) An entry, each week, of the time and result of test of auxiliary transmitter.

(2) A notation of all frequency checks and measurements made independently of the frequency monitor and of the correlation of these measurements with frequency monitor indications.

(3) A notation each week of the calibration check of automatic recording devices as required by § 73.283(b)(3).

(4) An entry of the date and time of removal from and restoration to service of any of the following equipment in the event it becomes defective:

(i) Modulation monitor.

(ii) Frequency monitor.

(iii) Final stage plate voltmeter.

(iv) Final stage plate ammeter.

(v) Transmission line radio frequency voltage, current, or power meter.

(5) The entries required by § 17.49(d) of this chapter concerning quarterly inspections of the condition of tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(6) Entries shall be made so as to describe fully any experimental operation pursuant to § 73.262.

(7) Any other entries required by the current instrument of authorization of the station and the provisions of this subpart.

(b) Upon completion of the inspection required by § 73.265(e), the inspecting operator shall enter a signed statement that the required inspection has been made, noting in detail the tests, adjustments, and repairs which were accomplished in order to insure operation in accordance with the provisions of this subpart and the current instrument of authorization of the station. The statement shall also specify the amount of time, exclusive of travel time to and from the transmitter, which was devoted to such inspection duties. If complete repair could not be effected, the statement shall set forth in detail the items of equipment concerned, the manner and degree in which they are defective, and the reasons for failure to make satisfactory repairs.

(c) The inspecting operator shall sign and date the maintenance log at the conclusion of each inspection. In preparing the maintenance log, original data may be recorded in rough form and later transcribed into the log, but in such cases all portions of the memorandum shall be preserved as a part of the complete log.

(d) Any necessary corrections in the maintenance log shall be made only by the inspecting operator who shall initial and date all changes prior to signing the log. If corrections or additions are made on the log after the log has been so signed explanation must be made the subject of a separate memorandum, dated and signed by the operator who made the entry in question or the station technical supervisor or by an officer of the licensee. Such memorandum should explain fully the circumstances surrounding the errors or ambiguities, and shall be affixed to the original log in question. If written and signed by other than the inspecting operator who made the entry, the memorandum shall contain a satisfactory explanation of why such signature is lacking.

[31 F.R. 751, Jan. 20, 1966, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 73.285 Retention of logs.

Logs of FM broadcast stations shall be retained by the licensee or permittee for a period of 2 years: *Provided, however*, That logs involving communications incident to a disaster or which include communications incident to or involved in an investigation by the Commission and concerning which the licensee or permittee has been notified, shall be retained by the licensee or permittee until he is specifically authorized in writing by the Commission to destroy them: *Provided, further*, That logs incident to or involved in any claim or complaint of which the licensee or permittee has notice shall be retained by the licensee or permittee until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for the filing of suits upon such claims.

§ 73.286 Availability of logs and records.

The following shall be made available upon request by an authorized representative of the Commission:

(a) Program, operating and maintenance logs.

(b) Equipment performance measurements required by § 73.254.

§ 73.287 Station identification.

See § 73.1201.

[34 F.R. 19762, Dec. 17, 1969]

§ 73.288 Mechanical reproductions.

(a) No mechanically reproduced program consisting of a speech, news event, news commentator, forum, panel discussion, or special event in which the element of time is of special significance, or any other program in which the element of time is of special significance and presentation of which would create, either intentionally or otherwise, the impression or belief on the part of the listening audience that the event or program being broadcast is in fact occurring simultaneously with the broadcast, shall be broadcast without an appropriate announcement being made either at the beginning or end of such reproduction or at the beginning or end of the program in which such reproduction is used that it is a mechanical reproduction or a mechanically reproduced program: *Provided, however,* That each such program of one minute or less need not be announced as such.

(b) The exact form of identifying announcement is not prescribed, but the language shall be clear and in terms commonly used and understood. Any other program mechanically reproduced or series of mechanical reproductions, including a mechanical reproduction used for background music, sound effects, station identification, program identification (theme music of short duration) or identification of sponsorship of the program proper, need not be announced as provided in paragraph (a) of this section, but the licensee shall not attempt affirmatively to create the impression that any program being broadcast by mechanical reproduction consists of live talent.

(c) The requirements of paragraph (a) of this section are waived with respect to network programs, transcribed and rebroadcast at a later hour because of the time zone differentials between the place where the program originates and where it is rebroadcast, this waiver being applicable whether the off-the-line recording is made by the network itself at one of its key stations or by an individual station, but only when the off-the-line recording is for broadcast at an hour not exceeding the time zone differential between the place where the program originates and where it is rebroadcast. Each station which broadcasts network programs at a later hour in accordance with this waiver shall make an appropriate announcement at least once each day between the hours of 10 a.m. and 10 p.m., stating that some or all of the network programs which are broadcast by that station are delayed broadcasts by means of transcription. This waiver provision also applies during the annual periods in which advanced time is effective with respect to network programs transcribed and rebroadcast 1 hour later because of the time differential resulting from the adoption or nonadoption of advanced time in some areas.

[28 F.R. 13623, Dec. 14, 1963, as amended at 33 F.R. 4412, Mar. 12, 1968]

§ 73.289 Sponsored programs, announcement of.

(a) When an FM broadcast station transmits any matter for which money, services, or other valuable consideration is either directly or indirectly paid or promised to, or charged or received by, such station, the station shall broadcast an announcement that such matter is sponsored, paid for, or furnished, either in whole or in part, and by whom or on whose behalf such consideration was supplied: *Provided, however,* That "service or other valuable consideration" shall not include any service or property furnished without charge or at a nominal charge for use on, or in connection with, a broadcast unless it is so furnished in consideration for an identification in a broadcast of any person, product, service, trademark, or brand name beyond an identification which is reasonably related to the use of such service or property on the broadcast.

(b) The licensee of each FM broadcast station shall exercise reasonable diligence to obtain from its employees, and from other persons with whom it deals directly in connection with any program matter for broadcast, information to enable such licensee to make the announcement required by this section.

(c) In any case where a report (concerning the providing or accepting of valuable consideration by any person for inclusion of any matter in a program intended for broadcasting) has been made to an FM broadcast station, as required by section 508 of the Communications Act of 1934, as amended, of circumstances which would have required an announcement under this section had the consideration been received by such FM broadcast station, an appropriate announcement shall be made by such station.

(d) In the case of any political program or any program involving the discussion of public controversial issues for which any records, transcriptions, talent, scripts, or other material or services of any kind are furnished, either directly or indirectly, to a station as an inducement to the broadcasting of such program, an announcement shall be made both at the beginning and conclusion of such program on which such material or services are used that such records, transcriptions, talent, scripts, or other material or services have been furnished to such station in connection with the broadcasting of such program: *Provided, however*, That only one such announcement need be made in the case of any such program of 5 minutes' duration or less, which announcement may be made either at the beginning or conclusion of the program.

(e) The announcement required by this section shall fully and fairly disclose the true identity of the person or persons by whom or in whose behalf such payment is made or promised, or from whom or in whose behalf such services or other valuable consideration is received or by whom the material or services referred to in paragraph (d) of this section are furnished. Where an agent or other person contracts or otherwise makes arrangements with a station on behalf of another, and such fact is known to the station, the announcement shall disclose the identity of the person or persons in whose behalf such agent is acting instead of the name of such agent.

(f) In the case of any program, other than a program advertising commercial products or services, which is sponsored, paid for, or furnished, either in whole or in part, or for which material or services referred to in paragraph (d) of this section are furnished, by a corporation, committee, association, or other unincorporated group, the announcement required by this section shall disclose the name of such corporation, committee, association, or other unincorporated group. In each such case the station shall require that a list of the chief executive officers or members of the executive committee or of the board of directors of the corporation, committtee, association, or other unincorporated group shall be made available for public inspection at the studios or general offices of one of the FM broadcast stations carrying the program in each community in which the program is broadcast. Such lists shall be kept and made available for a period of 2 years.

(g) In the case of broadcast matter advertising commercial products or services, an announcement stating the sponsor's corporate or trade name, or the name of the sponsor's product, when it is clear that the mention of the name of the product constitutes a sponsorship identification, shall be deemed sufficient for the purposes of this section and only one such announcement need be made at any time during the course of the program.

(h) The announcements otherwise required by section 317 of the Communications Act of 1934, as amended, are waived with respect to the broadcast of "want ad" or classified advertisements sponsored by individuals. The waiver granted in this paragraph shall not extend to classified advertisements or want ads sponsored by any form of business enterprise, corporate or otherwise. Whenever sponsorship announcements are omitted pursuant to this paragraph the following conditions shall be observed:

(1) The licensee shall maintain a list showing the name, address, and (where available) the telephone number of each advertiser and shall attach this list to the program log for each day's operation; and

(2) Shall make this list available to members of the public who have a legitimate interest in obtaining the information contained in the list.

(i) Commission interpretations in connection with the provisions of this section may be found in the Commission's Public Notice entitled "Applicability of Sponsorship Identification Rules" (FCC 63-409; 28 F.R. 4732, May 10, 1963) and such supplements thereto as are issued from time to time.

(Sec. 317, 48 Stat. 1089, as amended; 47 U.S.C. 317) [28 F.R. 13623, Dec. 14, 1963, as amended at 32 F.R. 7916, June 1, 1967; 33 F.R. 15421, Oct. 17, 1968; 33 F.R. 18032, Dec. 4, 1968]

§ 73.290 Broadcasts by candidates for public office.

(a) *Definitions.* A "legally qualified candidate" means any person who has publicly announced that he is a candidate for nomination by a convention of a political party or for nomination or election in a primary, special, or general election, municipal, county, state or national, and who meets the qualifications prescribed by the applicable laws to hold the office for which he is a candidate, so that he may be voted for by the electorate directly or by means of delegates or electors, and who—

(1) Has qualified for a place on the ballot or

(2) Is eligible under the applicable law to be voted for by sticker, by writing in his name on the ballot, or other method, and (i) has been duly nominated by a political party which is commonly known and regarded as such, or (ii) makes a substantial showing that he is a bona fide candidate for nomination or office, as the case may be.

(b) *General requirements.* No station licensee is required to permit the use of its facilities by any legally qualified candidate for public office, but if any licensee shall permit any such candidate to use its facilities, it shall afford equal opportunities to all other such candidates for that office to use such facilities: *Provided,* That such licensee shall have no power of censorship over the material broadcast by any such candidate.

(c) *Rates and practices.* (1) The rates, if any, charged all such candidates for the same office shall be uniform and shall not be rebated by any means direct or indirect. A candidate shall, in each case, be charged no more than the rate the station would charge if the candidate were a commercial advertiser whose advertising was directed to promoting its business within the same area as that encompassed by the particular office for which such person is a candidate. All discount privileges otherwise offered by a station to commercial advertisers shall be available upon equal terms to all candidates for public office.

(2) In making time available to candidates for public office no licensee shall make any discrimination between candidates in charges, practices, regulations, facilities, or services for or in connection with the service rendered pursuant to this part, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any licensee make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to broadcast to the exclusion of other legally qualified candidates for the same public office.

(d) *Inspection of records.* Every licensee shall keep and permit public inspection of a complete record of all requests for broadcast time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the licensee of such requests, and the charges made, if any, if request is granted. Such records shall be retained for a period of two years.

NOTE: See § 1.526 of this chapter.

(e) *Time of request.* A request for equal opportunities must be submitted to the licensee within 1 week of the day on which the first prior use, giving rise to the right to equal opportunities, occurred: *Provided, however,* That where a person was not a candidate at the time of such first prior use, he shall submit his request within 1 week of the first subsequent use after he has become a legally qualified candidate for the office in question.

(f) *Burden of proof.* A candidate requesting such equal opportunities of the licensee, or complaining of non-compliance to the Commission shall have the burden of proving that he and his opponent are legally qualified candidates for the same public office.

(Sec. 315, 48 Stat. 1088, as amended; 47 U.S.C. 315) [28 F.R. 13623, Dec. 14, 1963, as amended at 30 F.R. 4547, Apr. 8, 1965; 35 F.R. 7120, May 6, 1970]

§ 73.291 Rebroadcast.

(a) The term "rebroadcast" means reception by radio of the program of a radio station, and the simultaneous or subsequent retransmission of such program by a broadcast station.

NOTE 1: As used in this section, program includes any complete program or part thereof.

NOTE 2: In case a program is transmitted from its point of origin to a broadcast station entirely by common carrier facilities, whether by wire line or radio, the transmission of this program is not considered a rebroadcast.

(b) FM broadcast stations may, without further authority from the Commission, rebroadcast programs originated by other U.S. FM and standard broadcast stations: *Provided*, That the Commission is notified in writing of the call letters of each station rebroadcast, together with certification that the originating station(s) has consented to the rebroadcast(s). However, the requirements of this paragraph do not apply to emergency rebroadcasting conducted pursuant to § 73.971(b), which provides unrestricted AM/FM/TV rebroadcast privileges for stations utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan.

NOTE: The notice and certification of consent shall be given within 3 days of any single rebroadcast, but in case of the regular practice of rebroadcasting certain programs of a standard or FM broadcast station several times during a license period, notice and certification of consent shall be given for the ensuing license period with the application for renewal of license, or at the beginning of such rebroadcast practice if begun during a license period.

(c) (1) The licensee of an FM broadcast station located within a State or the District of Columbia may, without further authority of the Commission, rebroadcast on a noncommercial basis a noncommercial program of a United States international broadcast station.

(2) The licensee of an FM broadcast station located in any territory or insular possession of the United States may, without further authority of the Commission, rebroadcast any program of a United States international broadcast station.

(3) In the case of any rebroadcast under the provisions of this paragraph, the Commission shall be notified of the call letters of each station whose program is rebroadcast and the licensee shall certify that express authority has been received from the licensee of the station originating the program.

(d) No licensee of an FM broadcast station shall rebroadcast the program of any United States radio station not designated in paragraph (b) or (c) of this section without written authority having first been obtained from the Commission upon application (informal) accompanied by written consent or certification of consent of the licensee of the station originating the program.

NOTE 1: The broadcasting of a program relayed by a remote pickup broadcast station or an ST broadcast station is not considered a rebroadcast.

NOTE 2: By Order No. 82, dated and effective June 24, 1941, until further order of the Commission, § 73.291(d) is suspended only insofar as it requires prior written authority of the Commission for the rebroadcasting of programs originated for that express purpose by United States Government radio stations.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325) [28 F.R. 13623, Dec. 14, 1963, as amended at 33 F.R. 7491, May 21, 1968; 34 F.R. 18802, Nov. 25, 1969]

§ 73.292 Lotteries.

(a) An application for construction permit, license, renewal of license, or any other authorization for the operation of a broadcast station, will not be granted where the applicant proposes to follow or continue to follow a policy or practice of broadcasting or permitting "the broadcasting of, any advertisement of or information concerning any lottery, gift enterprise, or similar scheme, offering prizes dependent in whole or in part upon lot or chance, or any list of the prizes drawn or awarded by means of any such lottery, gift enterprise, or scheme, whether said list contains any part or all of such prizes." (See 18 U.S.C. 1304.)

(b) The determination whether a particular program comes within the provisions of paragraph (a) of this section depends on the facts of each case. However, the Commission will in any event consider that a program comes within the provisions of paragraph (a) of this section if in connection with such program a prize consisting of money or thing of value is awarded to any person whose selection is dependent in whole or in part upon lot or chance, if as a condition of winning or competing for such prize, such winner or winners are required to furnish any money or thing of value or are required to have in their possession any product sold, manufactured, furnished or distributed by a sponsor of a program broadcast on the station in question.

(Sec. 1304, 62 Stat. 763, 18 U.S.C. 1304)

§ 73.293 Subsidiary Communications Authorizations.

(a) A FM broadcast licensee or permittee may apply for a Subsidiary Communications Authorization (SCA) to provide limited types of subsidiary services on a multiplex basis. Permissible uses must fall within one or both of the following categories:

(1) Transmission of programs which are of a broadcast nature, but which are of interest primarily to limited segments of the public wishing to subscribe thereto. Illustrative services include: background music; storecasting; detailed weather forecasting; special time signals; and other material of a broadcast nature expressly designed and intended for business, professional, educational, religious, trade, labor, agricultural or other groups engaged in any lawful activity.

(2) Transmission of signals which are directly related to the operation of FM broadcast stations; for example: relaying of broadcast material to other FM and standard broadcast stations; remote cueing and order circuits; remote control telemetering functions associated with authorized STL operation, and similar uses.

(b) Applications for Subsidiary Communications Authorizations shall be submitted on FCC Form 318. An applicant for SCA shall specify the particular nature or purpose of the proposed use.

(c) SCA operations may be conducted without restriction as to time so long as the main channel is programmed simultaneously.

§ 73.294 Nature of the SCA.

(a) The SCA is of a subsidiary or secondary nature and shall not exist apart from the FM license or permit. No transfer or assignment of it shall be made separate from the FM broadcast license, and failure to transfer the SCA with the FM license or permit renders the SCA void. Any assignment or transfer of an SCA shall, if desired, be requested as part of the main station's transfer or assignment application. The licensee or permittee must seek renewal of the SCA (on FCC Form 318) at the same time it applies for its renewal of FM license or permit; failure to renew the latter automatically terminates the SCA.

(b) The grant or renewal of an FM license or permit shall not be furthered or promoted by the proposed or past operation under an SCA; the licensee must establish that his broadcast operation is in the public interest wholly apart from the SCA activities. (Violation of rules applicable to the SCA operation would, of course, reflect on the licensee's qualifications to hold its broadcast license or permit.)

[28 F.R. 13623, Dec. 14, 1963, as amended at 34 F.R. 17108, Oct. 22, 1969]

§ 73.295 Operation under Subsidiary Communications Authorizations.

(a) Operations conducted under a Subsidiary Communications Authorization (SCA) shall conform to the uses and purposes authorized by the Commission in granting the SCA application. Prior permission to engage in any new or additional activity must be obtained from the Commission pursuant to application therefor.

(b) Superaudible and subaudible tones and pulses may, when authorized by the Commission, be employed by SCA holders to activate and deactivate subscribers' multiplex receivers. The use of these or any other control techniques to delete main channel material is specifically forbidden.

(c) In all arrangements entered into with outside parties affecting SCA operation, the licensee or permittee must retain control over all material transmitted over the station's facilities, with the right to reject any material which it deems inappropriate or undesirable. Subchannel leasing agreements shall be reduced to writing and filed with the Commission pursuant to § 1.613(d) of this chapter.

(d) The logging, announcement, and other requirements imposed by §§ 73.282, 73.283, 73.284, 73.287, 73.288, and 73.289 are not applicable to material transmitted on authorized subcarrier frequencies.

(e) To the extent that SCA circuits are used for the transmission of program material, each licensee or permittee shall maintain a daily program log in which a general description of the material transmitted shall be entered once during each broadcast day: *Provided, however,* That in the event of a change in the general description of the material transmitted, an entry shall be made in the SCA program log indicating the time of each such change and a description thereof.

(f) Each licensee or permittee shall maintain a daily operating log for SCA operation in which the following entries shall be made (excluding subcarrier interruptions of five minutes or less):

(1) Time subcarrier generator is turned on.

(2) Time modulation is applied to subcarrier.

(3) Time modulation is removed from subcarrier.

(4) Time subcarrier generator is turned off.

(5) An entry describing the results

obtained in determining the frequency of each SCA subcarrier.

(g) Program and operating logs for SCA operation may be kept on special columns provided on the station's regular program and operating log sheets.

(h) Technical standards governing SCA operation (§ 73.319) shall be observed by all FM broadcast stations engaging in such operation.

(i) The subcarrier frequency of each SCA subcarrier shall be checked as often as necessary to insure that it is kept at all times within 500 cycles per second of the authorized frequency. At least one check shall be made each day. The choice of method of performing the daily frequency check is left to the discretion of the licensee. However, whatever method is used shall be capable of sufficient accuracy to reveal deviations of the operating frequency in excess of the 500 cycle per second tolerance.

[29 F.R. 7471, June 10, 1964, as amended at 31 F.R. 7907, June 3, 1966]

§ 73.296 Broadcast of telephone conversations.

See § 73.1206 which is applicable to all FM broadcast stations.

[35 F.R. 7733, May 20, 1970]

§ 73.297 Stereophonic broadcasting.

(a) FM broadcast stations may, without further authority, transmit stereophonic programs in accordance with the technical standards set forth in § 73.322: *Provided, however,* That the Commission and the Engineer in Charge of the radio district in which the station is located shall be notified within 10 days of the installation of type-accepted stereophonic transmission equipment or any change therein, and of the commencement of stereophonic programing.

(b) The pilot subcarrier frequency shall be checked as often as necessary to insure that it is kept at all times within the prescribed tolerance. At least one check shall be made each day. The choice of method of performing the daily frequency check is left to the discretion of the licensee. However, whatever method is used shall be capable of sufficient accuracy to reveal deviations of the pilot subcarrier frequency in excess of the prescribed 2-cycle per second tolerance.

[31 F.R. 7907, June 3, 1966]

§ 73.298 Operation during emergency.

(a) When necessary to the safety of life and property and in response to dangerous conditions of a general nature, FM broadcast stations may, at the discretion of the licensee and without further Commission authority, transmit emergency weather warnings and other emergency information. Examples of emergency situations which may warrant either an immediate or delayed response by the licensee are: Tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, discharge of toxic gases, widespread power failures, industrial explosions, and civil disorders. Transmission of information concerning school closings and changes in schoolbus schedules resulting from any of these conditions, is appropriate. In addition, and if requested by responsible public officials, emergency point-to-point messages may be transmitted for the purpose of requesting or dispatching aid and assisting in rescue operations.

(b) When emergency operation is conducted utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan as provided in § 73.971, the attention signal described in § 73.906 may be employed.

(c) Emergency operation shall be confined to the hours, frequencies, powers, and modes of operation specified in the license documents of the stations concerned.

(d) Any emergency operation undertaken in accordance with this section may be terminated by the Commission, if required in the public interest.

(e) Immediately upon cessation of an emergency during which broadcast facilities were used for the transmission of point-to-point messages under paragraph (a) of this section, a report in letter form shall be forwarded to the Commission and the Engineer in Charge of the radio district in which the station is located, setting forth the nature of the emergency, the dates and hours of emergency operation, and a brief description of the material carried during the emergency period.

(f) If an Emergency Action Condition is declared while emergency operation under this section is in progress, the Emergency Action Notification shall take precedence.

[33 F.R. 7491, May 21, 1968]

§ 73.299 Fraudulent billing practices.

See § 73.1205 which is applicable to all FM broadcast stations.

[35 F.R. 7900, May 22, 1970]

§ 73.300 Personal attacks; political editorials.

(a) When, during the presentation of views on a controversial issue of public importance, an attack is made upon the honesty, character, integrity or like personal qualities of an identified person or group, the licensee shall, within a reasonable time and in no event later than 1 week after the attack, transmit to the person or group attacked (1) notification of the date, time and identification of the broadcast; (2) a script or tape (or an accurate summary if a script or tape is not available) of the attack; and (3) an offer of a reasonable opportunity to respond over the licensee's facilities.

(b) The provisions of paragraph (a) of this section shall not be applicable (1) to attacks on foreign groups or foreign public figures; (2) to personal attacks which are made by legally qualified candidates, their authorized spokesmen, or those associated with them in the campaign, on other such candidates, their authorized spokesmen, or persons associated with the candidates in the campaign; and (3) to bona fide newscasts, bona fide news interviews, and on-the-spot coverage of a bona fide news event (including commentary or analysis contained in the foregoing programs, but the provisions of paragraph (a) of this section shall be applicable to editorials of the licensee).

NOTE: The fairness doctrine is applicable to situations coming within (b) (3), above, and, in a specific factual situation, may be applicable in the general area of political broadcasts (b) (2), above. See, section 315(a) of the Act, 47 U.S.C. 315(a); Public Notice: *Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance.* 29 F.R. 10415. The categories listed in (b) (3) are the same as those specified in section 315(a) of the Act.

(c) Where a licensee, in an editorial, (i) endorses or (ii) opposes a legally qualified candidate or candidates, the licensee shall, within 24 hours after the editorial, transmit to respectively (i) the other qualified candidate or candidates for the same office or (ii) the candidate opposed in the editorial (1) notification of the date and the time of the editorial; (2) a script or tape of the editorial; and (3) an offer of a reasonable opportunity for a candidate or a spokesman of the candidate to respond over the licensee's facilities: *Provided, however,* That where such editorials are broadcast within 72 hours prior to the day of the election, the licensee shall comply with the provisions of this paragraph sufficiently far in advance of the broadcast to enable the candidate or candidates to have a reasonable opportunity to prepare a response and to present it in a timely fashion.

[32 F.R. 10305, July 12, 1967, as amended at 33 F.R. 5364, Apr. 4, 1968]

§ 73.301 Equal employment opportunities.

(a) *General policy.* Equal opportunity in employment shall be afforded by all licensees or permittees of commercially or noncommercially operated standard, FM, television or international broadcast stations (as defined in this part) to all qualified persons, and no person shall be discriminated against in employment because of race, color, religion, national origin or sex.

(b) *Equal employment opportunity program.* Each station shall establish, maintain and carry out, a positive continuing program of specific practices designed to assure equal opportunity in every aspect of station employment policy and practice. Under the terms of its program, a station shall:

(1) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(2) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(3) Communicate the station's equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin or sex, and solicit their recruitment assistance on a continuing basis.

(4) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon race, color, religion, national origin or sex, from the station's personnel policies and practices and working conditions.

(5) Conduct continuing review of job structure and employment practices and adopt positive recruitment, training, job design and other measures needed in order to insure genuine equality of oppor-

tunity to participate fully in all organizational units, occupations and levels of responsibility in the station.

(c) Applicants for construction permit for a new facility, for assignment of license or construction permit or for transfer of control (other than pro forma or involuntary assignments, and transfers), and applicants for renewal of license who have not previously done so, shall file with the Commission programs designed to provide equal employment opportunities for Negroes, orientals, American Indians, Spanish-surnamed Americans, and women, or amendments to such programs. Guidelines for the preparation of such programs are set out in section VI of the appropriate application forms. See 32 FCC 2d ——. A program need not be filed by any station having less than five full-time employees or with respect to any minority group which is represented in such insignificant numbers in the area that a program would not be meaningful. In the latter situation, a statement of explanation should be filed.

(Secs. 308–10, 48 Stat., as amended 1084–1086; 47 U.S.C. 308–310) [35 F.R. 8827, June 6, 1970, as amended at 36 F.R. 25013, Dec. 28, 1971]

FM TECHNICAL STANDARDS

§ 73.310 Definitions.

(a) *Frequency modulation.*

Antenna height above average terrain. The average of the antenna heights above the terrain from 2 to 10 miles from the antenna for the eight directions spaced evenly for each 45 degrees of azimuth starting with True North. (In general, a different antenna height will be determined in each direction from the antenna. The average of these various heights is considered the antenna height above the average terrain. In some cases less than eight directions may be used. See § 73.313(d).) Where circular or elliptical polarization is employed, the antenna height above average terrain shall be based upon the height of the radiation center of the antenna which transmits the horizontal component of radiation.

Antenna power gain. The square of the ratio of the root-mean-square free space field strength produced at one mile in the horizontal plane, in millivolts per meter for one kilowatt antenna input power to 137.6 mv/m. This ratio should be expressed in decibels (db). (If specified for a particular direction, antenna power gain is based on the field strength in that direction only.)

Center frequency. The term "center frequency" means:

(1) The average frequency of the emitted wave when modulated by a sinusoidal signal.

(2) The frequency of the emitted wave without modulation.

Effective radiated power. The term "effective radiated power" means the product of the antenna power (transmitter output power less transmission line loss) times (1) the antenna power gain, or (2) the antenna field gain squared. Where circular or elliptical polarization is employed, the term effective radiated power is applied separately to the horizontal and vertical components of radiation. For allocation purposes, the effective radiated power authorized is the horizontally polarized component of radiation only.

FM broadcast band. The band of frequencies extending from 88 to 108 megacycles per second, which includes those assigned to noncommercial educational broadcasting.

FM broadcast channel. A band of frequencies 200 kc/s wide and designated by its center frequency. Channels for FM broadcast stations begin at 88.1 Mc/s and continue in successive steps of 200 kc/s to and including 107.9 Mc/s.

FM broadcast station. A station employing frequency modulation in the FM broadcast band and licensed primarily for the transmission of radiotelephone emissions intended to be received by the general public.

Field strength. The electric field strength in the horizontal plane.

Free space field strength. The field strength that would exist at a point in the absence of waves reflected from the earth or other reflecting objects.

Frequency Modulation. A System of modulation where the instantaneous radio frequency varies in proportion to the instantaneous amplitude of the modulating signal (amplitude of modulating signal to be measured after pre-emphasis, if used) and the instantaneous radio frequency is independent of the frequency of the modulating signal.

Frequency swing. The instantaneous departure of the frequency of the emitted wave from the center frequency resulting from modulation.

Multiplex transmission. The term "multiplex transmission" means the simultaneous transmission of two or more signals within a single channel. Multiplex transmission as applied to FM broadcast stations means the transmission of facsimile or other signals in addition to the regular broadcast signals.

Percentage modulation. The ratio of the actual frequency swing to the frequency swing defined as 100 percent modulation, expressed in percentage. For FM broadcast stations, a frequency swing of ±75 kilocycles is defined as 100 percent modulation.

(b) *Stereophonic broadcasting.*

Cross-talk. An undesired signal occurring in one channel caused by an electrical signal in another channel.

FM stereophonic broadcast. The transmission of a stereophonic program by a single FM broadcast station utilizing the main channel and a stereophonic subchannel.

Left (or right) signal. The electrical output of a microphone or combination of microphones placed so as to convey the intensity, time, and location of sounds originating predominately to the listener's left (or right) of the center of the performing area.

Left (or right) stereophonic channel. The left (or right) signal as electrically reproduced in reception of FM stereophonic broadcasts.

Main channel. The band of frequencies from 50 to 15,000 cycles per second which frequency-modulate the main carrier.

Pilot subcarrier. A subcarrier serving as a control signal for use in the reception of FM stereophonic broadcasts.

Stereophonic separation. The ratio of the electrical signal caused in the right (or left) stereophonic channel to the electrical signal caused in the left (or right) stereophonic channel by the transmission of only a right (or left) signal.

Stereophonic subcarrier. A subcarrier having a frequency which is the second harmonic of the pilot subcarrier frequency and which is employed in FM stereophonic broadcasting.

Stereophonic subchannel. The band of frequencies from 23 to 53 kilocycles per second containing the stereophonic subcarrier and its associated sidebands.

(c) *Facsimile.*

Available line. The portion of the total length of scanning line that can be used specifically for picture signals.

Index of cooperation. The product of the number of lines per inch, the available line length in inches, and the reciprocal of the line-use ratio (e.g., $105 \times 8.2 \times 8/7 = 984$).

Line-use ratio. The ratio of the available line to the total length of scanning line.

Optical density. The logarithm (to the base 10) of the ratio of incident to transmitted or reflected light.

Rectilinear scanning. The process of scanning an area in a predetermined sequence of narrow straight parallel strips.

§ 73.311 Field strength contours.

(a) Applications for FM broadcast authorizations must show two field strength contours. These are the 70 dbu (3.16 mv/m) and the 60 dbu (1 mv/m) contours. These contours indicate only the approximate extent of coverage over average terrain in the absence of interference. Under actual conditons, the true coverage may vary greatly from these estimates because the terrain over any specific path is expected to be different from the average terrain on which the field strength chart was based. Because of these factors the estimated contours give no assurance of service to any specific percentage of receiver locations within the distances indicated.

(b) The field strength contours provided for in this section shall be considered for the following purposes only:

(1) In the estimation of coverage resulting from the selection of a particular transmitter site by an applicant for an FM broadcast station.

(2) In connection with problems of coverage arising out of application of § 73.240.

(3) In determining compliance with § 73.315(a) concerning the minimum field strength to be provided over the principal community to be served.

[28 F.R. 13623, Dec. 14, 1963, as amended at 31 F.R. 10126, July 27, 1966; 32 F.R. 11471, Aug. 9, 1967]

§ 73.312 Topographic data.

(a) In the preparation of the profile graphs previously described, and in determining the location and height above mean sea level of the antenna site, the elevation or contour intervals shall be taken from United States Geological Survey Topographic Quadrangle Maps, United States Army Corps of Engineers Maps or Tennessee Valley Authority maps, whichever is the latest, for all areas for which such maps are available.

If such maps are not published for the area in question, the next best topographic information should be used. Topographic data may sometimes be obtained from state and municipal agencies. The data from the Sectional Aeronautical Charts (including bench marks) or railroad depot elevations and highway elevations from road maps may be used where no better information is available. In cases where limited topographic data can be obtained, use may be made of an altimeter in a car driven along roads extending generally radially from the transmitter site.

(b) The Commission will not ordinarily require the submission of topographical maps for areas beyond 15 miles from the antenna site, but the maps must include the principal city or cities to be served. If it appears necessary, additional data may be requested.

(c) The U.S. Geological Survey Topography Quadrangle Sheets may be obtained from the U.S. Geological Survey Department of the Interior, Washington, D.C. 20240. The Sectional Aeronautical Charts are available from the U.S. Coast and Geodetic Survey, Department of Commerce, Washington, D.C. 20235. These maps may also be secured from branch offices and from authorized agents or dealers in most principal cities.

[28 F.R. 13623, Dec. 14, 1963, as amended at 31 F.R. 10126, July 27, 1966]

§ 73.313 Prediction of coverage.

(a) All predictions of coverage made pursuant to this section shall be made without regard to interference and shall be made only on the basis of estimated field strengths.

(b) Predictions of coverage shall be made only for the same purposes as relate to the use of field strength contours as specified in § 73.311.

(c)(1) In predicting the distance to the field strength contours, the F (50, 50) field strength chart, Figure 1 of § 73.333, shall be used. The 50 percent field strength is defined as that value exceeded for 50 percent of the time. The F (50, 50) chart gives the estimated 50 percent field strengths exceeded at 50 percent of the locations in decibels above 1 microvolt per meter. The chart is based on an effective power of 1 kilowatt radiated from a half-wave dipole in free space, which produces an unattenuated field strength at 1 mile of about 103 db above 1 microvolt per meter (137.6 millivolts per meter).

(2) To use the chart for other powers, the sliding scale associated with the chart should be trimmed and used as the ordinate scale. This sliding scale is placed on the chart with the appropriate gradation for power in line with the horizontal 40 db line on the chart. The right edge of the scale is placed in line with the approprate antenna height gradations, and the chart then becomes direct reading (in uv/m and in db above 1 uv/m) for this power and antenna height. Where the antenna height is not one of those for which a scale is provided, the signal strength or distance is determined by interpolation between the curves connecting the equidistant scale. Dividers may be used in lieu of the sliding scale. In predicting the distance to the field strength contours, the effective radiated power to be used is that in the horizontal plane in the pertinent direction. In predicting other field strengths over areas not in horizontal plane, the effective radiated power to be used is the power in the direction of such areas; the appropriate vertical plane radiation pattern must, of course, be considered in determining this power.

(d) The antenna height to be used with this chart is the height of the radiation center of the antenna above the average terrain along the radial in question. In determining the average elevation of the terrain, the elevations between 2 and 10 miles from the antenna site are employed. Profile graphs shall be drawn for eight radials beginning at the antenna site and extending 10 miles therefrom. The radials should be drawn for each 45 degrees of azimuth starting with True North. At least one radial must include the principal community to be served even though such community may be more than 10 miles from the antenna site. However, in the event none of the evenly spaced radials include the principal community to be served and one or more such radials are drawn in addition to the eight evenly spaced radials, such additional radials shall not be employed in computing the antenna height above average terrain. Where the 2- to 10-mile portion of a radial extends in whole or in part over a large body of water or extends over foreign territory but the 50 uv/m contour encompasses land area within the United States beyond the 10-mile portion of the radial, the entire 2- to 10-mile portion of the radial shall be included in the computation of antenna height above average terrain. However, where the 50 uv/m contour does not so encompass United States land area and (1) the entire 2- to 10-mile portion of the radial extends over large bodies of water or foreign territory, such radial shall be completely omitted from the computation of antenna height above average terrain, and (2) where a part of the 2- to 10-mile portion of a radial extends over large bodies of water or over foreign territory, only that part of the radial extending from the 2-mile sector to the outermost portion of land area within the United States covered by the radial shall be employed in the computation of antenna height above average terrain. The profile graph for each radial should be plotted by contour intervals of from 40 to 100 feet and, where the data permits, at least 50 points of elevation (generally uniformly spaced) should be used for each radial. In instances of very rugged terrain where the use of contour intervals of 100 feet would result in several points in a short distance, 200- or 400-foot contour intervals may be used for such distances. On the other hand, where the terrain is uniform or gently sloping the smallest contour interval indicated on the topographic map should be used, although only relatively few points may be available. The profile graph should indicate the topography accurately for each radial, and the graphs should be plotted with the distance in miles as the abscissa and the elevation in feet above mean sea level as the ordinate. The profile graphs should indicate the source of the topographical data employed. The graph should also show the elevation of the center of the radiating system. The graph may be plotted either on rectangular coordinate paper or on special paper which shows the curvature of the earth. It is not necessary to take the curvature of the earth into consideration in this procedure, as this factor is taken care of in the charts showing signal strengths. The average elevation of the 8-mile distance between 2 and 10 miles from the antenna site should then be determined from the profile graph for each radial. This may be obtained by averaging a large number of equally spaced points, by using a planimeter, or by obtaining the median elevation (that exceeded for 50 percent of the distance) in sectors and averaging those values.

(e) In cases where the terrain in one or more directions from the antenna site departs widely from the average elevation of the 2- to 10-mile sector, the prediction method may indicate contour distances that are different from what may be expected in practice. For example, a mountain ridge may indicate the practical limit of service although the prediction method may indicate otherwise. In such cases the prediction method should be followed, but a supplemental showing may be made concerning the contour distances as determined by other means. Such supplemental showing should describe the procedure employed and should include sample calculations. Maps of predicted coverage should include both the coverage as predicted by the regular method and as predicted by a supplemental method. When measurements of area are required, these should include the area obtained by the regular prediction method and the area obtained by the supplemental method. In directions where the terrain is such that negative antenna heights or heights below 100 feet for the 2- to 10-mile sector are obtained, a supplemental showing of expected coverage must be included together with a description of the method employed in predicting such coverage. In special cases, the Commission may require additional information as to terrain and coverage.

§ 73.315 Transmitter location.

(a) The transmitter location shall be chosen so that, on the basis of the effective radiated power and antenna height above average terrain employed, a minimum field strength of 70 decibels above one microvolt per meter (dbu), or 3.16 millivolts per meter, will be provided over the entire principal community to be served.

(b) The transmitter location should be as near the center of the proposed service area as possible consistent with the applicant's ability to find a site with sufficient elevation to provide service throughout the area. Location of the antenna at a point of high elevation is necessary to reduce to a minimum the shadow effect on propagation due to hills and buildings which may reduce materially the intensity of the station's signals in a particular direction. The transmitting site should be selected consistent with the purpose of the station, i.e., whether it is intended to serve a small city, a metropolitan area, or a large region. Inasmuch as service may be provided by signals of 1 mv/m or greater field strengths in metropolitan areas, and inasmuch as signals as low as 50 uv/m may provide service in rural areas, considerable latitude in the geographical location of the transmitter is permitted; however, the necessity for a high elevation for the antenna may render this problem difficult. In general, the transmitting antenna of a station should be located at the most central point at the highest elevation available. In providing the best degree of service to an area, it is usually preferable to use a high antenna rather than a lower antenna with increased transmitter power. The location should be so chosen that line-of-sight can be obtained from the antenna over the principal city or cities to be served; in no event should there be a major obstruction in this path.

(c) The transmitting location should be selected so that the 1 mv/m contour encompasses the urban population within the area to be served. It is recognized that topography, shape of the desired service area, and population distribution may make the choice of a transmitter location difficult. In such cases consideration may be given to the use of a directional antenna system, although it is generally preferable to choose a site where a nondirectional antenna may be employed.

(d) In cases of questionable antenna locations it is desirable to conduct propagation tests to indicate the field intensity expected in the principal city or cities to be served and in other areas, particularly where severe shadow problems may be expected. In considering applications proposing the use of such locations, the Commission may require site tests to be made. Such tests should include measurements made in accordance with good engineering practice, and full data thereon must be supplied to the Commission. The test transmitter should employ an antenna having a height as close as possible to the proposed antenna height, using a balloon or other support if necessary and feasible. Information concerning the authorization of site tests may be obtained from the Commission upon request.

(e) Present information is not sufficiently complete to establish "blanket areas" of FM broadcast stations, which are defined as those areas adjacent to the transmitters in which the reception of other stations is subject to interference due to the strong signal from the stations. Where it is found necessary to locate the transmitter in a residential area where blanketing problems may appear to be excessive, the application must include a showing concerning the availability of other sites. The authorization of station construction in areas where blanketing problems appear to be excessive will be on the basis that the applicant will assume full responsibility for the adjustment of reasonable complaints arising from excessively strong signals of the applicant's station.

(f) Cognizance must of course be taken regarding the possible hazard of the proposed antenna structure to aviation and the proximity of the proposed site to airports and airways. Procedures and standards with respect to the Commission's consideration of proposed antenna structures which will serve as a guide to persons intending to apply for radio station licenses are contained in Part 17 of this chapter (Construction, Marking, and Lighting of Antenna Structures).

§ 73.316 Antenna systems.

(a) It shall be standard to employ horizontal polarization; however, circular or elliptical polarization may be employed if desired. Clockwise or counterclockwise rotation may be used. The supplemental vertically polarized effective radiated power required for circular or elliptical polarization shall in no event exceed the effective radiated power authorized.

(b) The antenna must be constructed so that it is as clear as possible of surrounding buildings or objects that would cause shadow problems.

(c) *Directional antennas.* A directional antenna is considered to be an antenna that is designed or altered for the purpose of obtaining a noncircular radiation pattern. Directional antennas may not be used for the purpose of reducing minimum mileage separation requirements but may be employed for the purpose of improving service or for the purpose of using a particular site; directional antennas with a ratio of maximum to minimum radiation in the horizontal plane of more than 15 decibels will not be permitted.

(d) *Applications for directional antennas.* Applications proposing the use of directional antenna systems must be accompanied by the following:

(1) Complete description of the proposed antenna system, including:

(i) a description of the means whereby the directivity is proposed to be obtained, and

(ii) the means (such as a rotatable reference antenna) whereby the operational antenna pattern will be determined prior to licensed operation and maintained within proper tolerances thereafter.

(2) Horizontal and vertical plane radiation patterns showing the free space field strength in mv/m at 1 mile and effective radiated power in dbk for each direction. If directivity was computed, the showing shall include the method by which the radiation patterns were computed, including formulae used, sample calculations and tabulations of data. If the directivity was measured, the method employed shall be fully described, including the equipment used, and the resultant measured data shall be tabulated. Sufficient vertical patterns shall be included to indicate clearly the radiation characteristics of the antenna above and below the horizontal plane. Complete information and patterns shall be provided for angles of ±10° from the horizontal plane and sufficient additional information included on that portion of the pattern lying between +10° and the zenith and −10° and the nadir, to conclusively demonstrate the absence of undesirable lobes in these areas. The horizontal plane pattern shall be plotted on polar coordinate paper with reference to True North. The vertical plane pattern shall be plotted on rectangular coordinate paper with reference to the horizontal plane.

(3) Name, address, and qualifications of the engineer making the calculations.

(e) Applications proposing the use of FM broadcast antennas in the immediate vicinity (i. e., 200 feet or less) of (1) other FM broadcast antennas, or (2) television broadcast antennas for frequencies adjacent to the FM broadcast band, must include a showing as to the expected effect, if any, of such proximate operation.

(f) In cases where it is proposed to use a tower of a standard broadcast station as a supporting structure for an FM broadcast antenna, an application for construction permit (or modification of construction permit) for such standard broadcast station must be filed for consideration with the FM application, only in the event the overall height of the standard broadcast station tower changes. Applications may be required for other classes of stations when their towers are to be used in connection with FM stations.

(g) When an FM broadcast antenna is mounted on a nondirectional standard broadcast antenna, new resistance measurements must be made of the standard broadcast antenna after installation and testing of the FM broadcast antenna. During the installation and until the new resistance determination is approved, the standard broadcast station licensee should apply for authority (informal application) to operate by the indirect method of power determination. The FM broadcast license application will not be considered until the application form concerning resistance measurements is filed for the standard broadcast station.

(h) When an FM broadcast antenna is mounted on an element of a standard broadcast directional antenna, a full engineering study concerning the effect of the FM broadcast antenna on the directional pattern must be filed with the application concerning the standard broadcast station. Depending upon the individual case, the Commission may require readjustment and certain field intensity measurements of the standard broadcast station following the completion of the FM broadcast antenna system.

(i) When the proposed FM broadcast antenna is to be mounted on a tower in the vicinity of a standard broadcast directional array and it appears that the operation of the directional antenna system may be affected, an engineering study must be filed with the FM broadcast application concerning the effect of the FM broadcast antenna on the directional pattern. Readjustment and field intensity measurements of the standard broadcast station may be required following construction of the FM broadcast antenna.

(j) Information regarding data required in connection with standard broadcast directional antenna systems may be found in § 73.150 of this chapter. (See also Standard Broadcast Technical Standards.)

(k) If a common tower is used for antenna and/or antenna supporting purposes by two or more licensees or permittees of FM broadcast stations, or by one or more such licensees or permittees and one or more licensees or permittees of any other class or service, each permittee or licensee shall be responsible for painting and illuminating the structure when obstruction marking and lighting are required by the Commission.

(l) It is recommended that an emergency FM broadcast antenna be installed, or, alternately, an auxiliary transmission line or lines if feasible in the particular circumstances. Data thereon should be supplied with the application for construction permit; if proposed after station construction, an informal application should be submitted to the Commission.

(m) When necessary for the protection of air navigation, the antenna and supporting structure shall be painted and illuminated in accordance with the specifications supplied by the Commission pursuant to section 303 (q) of the Communications Act of 1934, as amended.

[28 F.R. 13623, Dec. 14, 1963, as amended at 30 F.R. 11860, Sept. 16, 1965; 34 F.R. 14222, Sept. 10, 1969]

§ 73.317 Transmitters and associated equipment.

(a) *Electrical performance standards.* The general design of the FM broadcast transmitting system (from input terminals of microphone preamplifier, through audio facilities at the studio, through lines or other circuits between studio and transmitter, through audio facilities at the transmitter, and through the transmitter, but excluding equalizers for the correction of deficiencies in microphone response) shall be in accordance with the following principles and specifications:

(1) The transmitter shall operate satisfactorily in the operating power range with a frequency swing of 75 kilocycles per second, which is defined as 100 percent modulation.

(2) The transmitting system shall be capable of transmitting a band of frequencies from 50 to 15,000 cycles Preemphasis shall be employed in accordance with the impedance-frequency characteristic of a series inductance-resistance network having a time constant of 75 microseconds. (See Fig. 2 of § 73.333.) The deviation of the system response from the standard preemphasis curve shall lie between two limits as shown in Figure 2 of § 73.333. The upper of these limits shall be uniform (no deviation) from 50 to 15,000 cycles. The lower limit shall be uniform from 100 to 7,500 cycles, and 3 db. below the upper limit; from 100 to 50 cycles the lower limit shall fall from the 3 db. limit at a uniform rate of 1 db. per octave (4 db. at 50 cycles); from 7,500 to 15,000 cycles the lower limit shall fall from the 3 db. limit at a uniform rate of 2 db. per octave (5 db. at 15,000 cycles).

(3) At any modulation frequency between 50 and 15,000 cycles and at modulation percentages of 25, 50, and 100 percent, the combined audio frequency harmonics measured in the output of the system shall not exceed the root-mean-square values given in the following table:

Modulating frequency:	*Distortion percent*
50 to 100 cycles	3.5
100 to 7,500 cycles	2.5
7,500 to 15,000 cycles	3.0

(i) Measurements shall be made employing 75 microsecond deemphasis in the measuring equipment and 75 microsecond preemphasis in the transmitting equipment, and without compression if a compression amplifier is employed. Harmonics shall be included to 30 kc/s.

(ii) It is recommended that none of the three main divisions of the system (transmitter, studio to transmitter circuit, and audio facilities) contribute over one-half of these percentages since at some frequencies the total distortion may become the arithmetic sum of the distortions of the divisions.

(4) The transmitting system output noise level (frequency modulation) in the band of 50 to 15,000 cycles shall be at least 60 decibels below 100 percent modulation (frequency swing of ±75 kilocycles). The measurement shall be made using 400 cycle modulation as a reference. The noise-measuring equipment shall be provided with standard 75 microsecond deemphasis; the ballistic characteristics of the instrument shall be similar to those of the standard VU meter.

(5) The transmitting system output noise level (amplitude modulation) in the band of 50 to 15,000 cycles shall be at least 50 decibels below the level representing 100 percent amplitude modulation. The noise-measuring equipment shall be provided with standard 75-microsecond deemphasis; the ballistic characteristics of the instrument shall be similar to those of the standard VU meter.

(6) Automatic means shall be provided in the transmitter to maintain the assigned center frequency within the allowable tolerance (±2000 cycles).

(7) The transmitter shall be equipped with suitable indicating instruments for the determination of operating power and with other instruments as are necessary for proper adjustment, operation, and maintenance of the equipment (see § 73.320).

(8) Adequate provision shall be made for varying the transmitter output power to compensate for excessive variations in line voltage or for other factors affecting the output power.

(9) Adequate provision shall be provided in all component parts to avoid overheating at the rated maximum output power.

(10) Means should be provided for connection and continuous operation of approved frequency and modulation monitors.

(11) If a limiting or compression amplifier is employed, precaution should be maintained in its connection in the circuit due to the use of preemphasis in the transmitting system.

(12) Any emission appearing on a frequency removed from the carrier by between 120 kc/s and 240 kc/s inclusive shall be attenuated at least 25 decibels below the level of the unmodulated carrier. Compliance with this specification will be deemed to show the occupied bandwidth to be 240 kc/s or less.

(13) Any emission appearing on a frequency removed from the carrier by more than 240 kc/s and up to and including 600 kc/s shall be attenuated at least 35 db below the level of the unmodulated carrier.

(14) Any emission appearing on a frequency removed from the carrier by more than 600 kc/s shall be attenuated at least $43 + 10 \log_{10}$ (Power, in watts) decibels below the level of the unmodulated carrier, or 80 decibels, whichever is the lesser attenuation.

(b) *Construction.* In general, the transmitter shall be constructed either on racks and panels or in totally enclosed frames protected as required by the provisions of the National Electrical Code concerning transmitting equipment at radio and television stations, and as set forth below:

(1) Means shall be provided for making all tuning adjustments, requiring voltages in excess of 350 volts to be applied to the circuit, from the front of the panels with all access doors closed.

(2) Proper bleeder resistors or other automatic means shall be installed across all capacitor banks to lower any voltage which may remain accessible with access door open to less than 350 volts within 2 seconds after the access door is opened.

(3) All plate supply and other high voltage equipment, including transformers, filters, rectifiers and motor generators, shall be protected so as to prevent injury to operating personnel.

(i) Commutator guards shall be provided on all high voltage rotating machinery. Coupling guards should be provided on motor generators.

(ii) Power equipment and control panels of the transmitter shall meet the above requirements (exposed 220 volt AC switching equipment on the front of the power control panels is not recommended but is not prohibited).

(iii) Power equipment located at a broadcast station but not directly associated with the transmitter (not purchased as part of same), such as power distribution panels, are not under the jurisdiction of the Commission; therefore § 73.254 does not apply.

(4) Metering equipment:

(i) All instruments having more than 1,000 volts potential to ground on the movement shall be protected by a cage or cover in addition to the regular case. (Some instruments are designed by the manufacturer to operate safely with voltages in excess of 1,000 volts on the movement. If it can be shown by the manufacturer's rating that the instrument will operate safely at the applied potential, additional protection is not necessary.)

(ii) In case the plate voltmeter is located on the low potential side of the multiplier resistor with the potential of the high potential terminal of the instrument at or less than 1,000 volts above ground, no protective case is required However, it is good practice to protect voltmeters subject to more than 5,000 volts with suitable over-voltage protective devices across the instrument terminals in case the winding opens.

(iii) Transmission line meters and any other radio frequency instrument which may be necessary for the operator to read shall be so installed as to be easily and accurately read without the operator having to risk contact with circuits carrying high potential radio frequency energy

(5) It is recommended that component parts comply as much as possible with the component specifications designated by the Army-Navy Electronics Standards Agency.

(c) *Wiring and shielding.* (1) The transmitter panels or units shall be wired in accordance with standard switchboard practice, either with insulated leads properly cabled and supported or with rigid bus bar properly insulated and protected.

(2) Wiring between units of the transmitter, with the exception of circuits carrying radio frequency energy, shall be installed in conduits or approved fiber or metal raceways for protection from mechanical injury.

(3) Circuits carrying radio frequency energy between units shall be coaxial, two wire balanced lines, or properly shielded.

(4) All stages or units shall be adequately shielded and filtered to prevent interaction and radiation.

(5) The frequency and modulation monitors and associated radio frequency lines to the transmitter shall be thoroughly shielded.

(d) *Installation.* (1) The installation shall be made in suitable quarters.

(2) Since an operator must be on duty at the transmitter control point during operation, suitable facilities for his welfare and comfort shall be provided at the control point.

(e) *Other technical data.* An accurate circuit diagram, as furnished by the manufacturer of the equipment, shall be retained at the transmitter location.

(f) *Operation.* In addition to specific requirements of the rules governing FM broadcast stations, the following operating requirements are specified:

(1) The maximum percentage of modulation shall be maintained in accordance with § 73.268. However, precautions shall be taken so as not to substantially alter the dynamic characteristics of musical programs.

(2) The station equipment shall be so operated, tuned, and adjusted that emissions outside of the authorized channel do not cause harmful interference to the reception of other radio stations. FM broadcast stations employing transmitters type accepted after January 1, 1960, shall maintain the bandwidth occupied by their emissions in accordance with the specifications set forth in paragraph (a) of this section. Stations employing transmitters installed or type accepted prior to January 1, 1960, shall achieve the highest degree of compliance practicable with their existing equipment. In either case, should harmful interference to the reception of other radio stations occur, the licensee may be required to take such further steps as may be necessary to eliminate the interference.

(3) If a limiting or compression amplifier is employed, care should be maintained in its use due to preemphasis in the transmitting system.

(g) *Studio equipment.* (1) Studio equipment shall be subject to all the above requirements where applicable except as follows:

(i) If properly covered by an underwriter's certificate, it will be considered as satisfying safety requirements.

(ii) The pertinent provisions of the National Electrical Code concerning transmitting equipment at radio and television stations shall apply for voltages only when in excess of 500 volts.

(2) No specific requirements are made with regard to the microphones to be employed. However, microphone performance (including compensating networks, if employed) shall be compatible with the required performance of the transmitting system.

(3) No specific requirements are made relative to the design and acoustical treatment of studios. However, the design of studios, particularly the main studio, shall be compatible with the required performance characteristics of FM broadcast stations.

[28 F.R. 13623, Dec. 14, 1963, as amended at 33 F.R. 15421, Oct. 17, 1968]

§ 73.318 Facsimile: engineering standards.

The following standards apply to facsimile broadcasting under § 73.266:

(a) Rectilinear scanning shall be employed, with scanning spot progressing from left to right and scanned lines progressing from top to bottom of subject copy.

(b) The standard index of cooperation shall be 984.

(c) The number of scanning lines per minute shall be 360.

(d) The line-use ratio shall be ⅞, or 315° of the full scanning cycle.

(e) The ⅛ cycle or 45° not included in the available scanning line shall be divided into 3 equal parts, the first 15° being used for transmission at approximately white level, the second 15° for transmission at approximately black level, and the third 15° for transmission at approximately white level.

(f) An interval of not more than 12 seconds shall be available between two pages of subject copy, for the transmission of a page-separation signal and/or other services.

(g) Amplitude or frequency (frequency-shift) modulation of the subcarrier shall be used.

(h) Subcarrier modulation shall normally vary approximately linearly with the optical density of the subject copy.

(i) Negative modulation shall be used, i.e., for amplitude modulation of subcarrier, maximum subcarrier amplitude and maximum radio frequency swing on black; for frequency modulation of subcarrier, highest instantaneous frequency of subcarrier on black.

(j) Subcarrier noise level shall be maintained at least 30 db. below maximum (black) picture modulation level, at the radio transmitter input.

(k) The facsimile subcarrier transmission shall be conducted in the frequency range between 22 and 28 kilocycles. Should amplitude modulation of the subcarrier be employed the subcarrier frequency shall be 25 kilocycles with sidebands extending not more than 3 kilocycles in either direction from the subcarrier frequency. Should frequency modulation of the subcarrier be employed the total swing of the subcarrier shall be within the range from 22 to 28 kilocycles, with 22 kilocycles corresponding to white and 28 kilocycles corresponding to black on the transmitted copy. In multiplex operation the modulation of the FM carrier by the modulated subcarrier shall not exceed 5 percent. In simplex operation the modulation of the FM carrier by the modulated subcarrier shall not exceed 30 percent.

(l) During periods of multiplex facsimile transmission, frequency modulation of the FM carrier caused by the aural signals shall, in the frequency range from 20 to 30 kilocycles, be at least 60 db. below 100 percent modulation. Frequency modulation of the FM carrier caused by the facsimile signals shall, in the frequency range from 50 to 15,000 cycles, be at least 60 db. below 100 percent modulation.

§ 73.319 Subsidiary communications multiplex operations: engineering standards.

(a) Frequency modulation of SCA subcarriers shall be used.

(b) The instantaneous frequency of SCA subcarriers shall at all times be within the range 20 to 75 kilocycles: *Provided, however,* That when the station is engaged in stereophonic broadcasting pursuant to § 73.297, the instantaneous frequency of SCA subcarriers shall at all times be within the range 53 to 75 kilocycles.

(c) The arithmetic sum of the modulation of the main carrier by SCA subcarriers shall not exceed 30 percent: *Provided, however,* That when the station is engaged in stereophonic broadcasting pursuant to § 73.297, the arithmetic sum of the modulation of the main carrier by the SCA subcarriers shall not exceed 10 percent.

(d) The total modulation of the main carrier, including SCA subcarriers, shall meet the requirements of § 73.268.

(e) Frequency modulation of the main carrier caused by the SCA subcarrier operation shall, in the frequency range 50 to 15,000 cycles, be at least 60 db below 100 percent modulation: *Provided, however,* That when the station is engaged in stereophonic broadcasting pursuant to § 73.297, frequency modulation of the main carrier by the SCA subcarrier operation shall, in the frequency range 50 to 53,000 cycles, be at least 60 db below 100 percent modulation.

[28 F.R. 13623, Dec. 14, 1963, as amended at 31 F.R. 7907, June 3, 1966]

§ 73.320 Indicating instruments—specifications.

The following requirements and specifications shall apply to indicating instruments used by FM broadcast stations:

(a) Instruments indicating the plate current or plate voltage of the last radio stage (linear scale instruments) shall meet the following specifications:

(1) Length of scale shall be not less than 2³⁄₁₀ inches.

(2) Accuracy shall be at least 2 percent of the full scale reading.

(3) Scale shall have at least 40 divisions.

(4) Full scale reading shall not be greater than five times the minimum normal indication.

(b) Instruments indicating transmission line current or voltage shall meet the following specifications:

(1) Instruments having linear scales shall meet the requirements of paragraph (a) (1), (2), (3), and (4) of this section.

(2) Instruments having logarithmic or square law scales:

(i) Shall meet the requirements of paragraph (a) (1) and (2) of this section for linear scale instruments.

(ii) Full scale reading shall not be greater than three times the minimum normal indication.

(iii) No scale division above one-third full scale reading shall be greater than one-thirtieth of the full scale reading.

(c) Radio frequency instruments having expanded scales:

(1) Shall meet the requirements of paragraph (a) (1), (2), and (4) of this section for linear scale instruments.

(2) No scale division above one-fifth full scale reading shall be greater than one-fiftieth of the full scale reading.

(3) The meter face shall be marked with the words "Expanded scale" or the abbreviation thereof (E. S.).

(d) No required instrument, the accuracy of which is questionable, shall be employed. Repairs and recalibration of instruments shall be made by the manufacturer, or by an authorized instrument repair service of the manufacturer, or by some other properly qualified and equipped instrument repair service. In any event the repaired instrument must be supplied with a certificate of calibration.

(e) [Reserved]

(f) The function of each instrument used in the equipment shall be clearly and permanently shown on the instrument itself or on the panel immediately adjacent thereto.

(g) Digital meters, printers, or other numerical readout devices may be used in addition to or in lieu of indicating instruments meeting the specifications of paragraphs (a) and (b) of this section. If a single digital device is used at the transmitter for reading and logging of operating parameters, either (1) indicating instruments meeting the above-mentioned specifications shall be installed in the transmitter and antenna circuit, or (2) a spare digital device shall be maintained at the transmitter with provision for its rapid substitution for the main device should that device malfunction. The readout of the device shall include at least three digits and shall indicate the value or a decimal multiple of the value of the parameter being read to an accuracy of at least 2 percent. The multiplier to be applied to the reading of each parameter shall be indicated at the operating position of a switch used to select the parameter for display, or on the face of an automatically printed log at least once for each calendar day.

[28 F.R. 13623, Dec. 14, 1963, as amended at 32 F.R. 13511, Sept. 27, 1967]

§ 73.321 Auxiliary transmitters.

Auxiliary transmitters may not exceed the power rating or operating power range of the main transmitter, but need not conform to the performance characteristics specified by § 73.317 (a)(2) to (a)(5) inclusive. The subsequent portions of § 73.317 apply to auxiliary transmitters.

§ 73.322 Stereophonic transmission standards.

(a) The modulating signal for the main channel shall consist of the sum of the left and right signals.

(b) A pilot subcarrier at 19,000 cycles plus or minus 2 cycles shall be transmitted that shall frequency modulate the main carrier between the limits of 8 and 10 percent.

(c) The stereophonic subcarrier shall be the second harmonic of the pilot subcarrier and shall cross the time axis with a positive slope simultaneously with each crossing of the time axis by the pilot subcarrier.

(d) Amplitude modulation of the stereophonic subcarrier shall be used.

(e) The stereophonic subcarrier shall be suppressed to a level less than one percent modulation of the main carrier.

(f) The stereophonic subcarrier shall be capable of accepting audio frequencies from 50 to 15,000 cycles.

(g) The modulating signal for the stereophonic subcarrier shall be equal to the difference of the left and right signals.

(h) The pre-emphasis characteristics of the stereophonic subchannel shall be identical with those of the main channel with respect to phase and amplitude at all frequencies.

(i) The sum of the side bands resulting from amplitude modulation of the stereophonic subcarrier shall not cause a peak deviation of the main carrier in excess of 45 percent of total modulation (excluding SCA subcarriers) when only a left (or right) signal exists; simultaneously in the main channel, the deviation when only a left (or right) signal exists shall not exceed 45 percent of total modulation (excluding SCA subcarriers).

(j) Total modulation of the main carrier including pilot subcarrier and SCA subcarriers shall meet the requirements of § 73.268 with maximum modulation of the main carrier by all SCA subcarriers limited to 10 percent.

(k) At the instant when only a positive left signal is applied, the main channel modulation shall cause an upward deviation of the main carrier frequency; and the stereophonic subcarrier and its sidebands signal shall cross the time axis simultaneously and in the same direction.

(l) The ratio of peak main channel deviation to peak stereophonic subchannel deviation when only a steady state left (or right) signal exists shall be within plus or minus 3.5 percent of unity for all levels of this signal and all frequencies from 50 to 15,000 cycles.

(m) The phase difference between the zero points of the main channel signal and the stereophonic subcarrier sidebands envelope, when only a steady state left (or right) signal exists, shall not exceed plus or minus 3 degrees for audio modulating frequencies from 50 to 15,000 cycles.

NOTE: If the stereophonic separation between left and right stereophonic channels is better than 29.7 decibels at audio modulating frequencies between 50 and 15,000 cycles, it will be assumed that paragraphs (l) and (m) of this section have been complied with.

(n) Cross-talk into the main channel caused by a signal in the stereophonic subchannel shall be attenuated at least 40 decibels below 90 percent modulation.

(o) Cross-talk into the stereophonic subchannel caused by a signal in the main channel shall be attenuated at least 40 decibels below 90 percent modulation.

(p) For required transmitter performance, all of the requirements of § 73.254 shall apply with the exception that the maximum modulation to be employed is 90 percent (excluding pilot subcarrier) rather than 100 percent.

(q) For electrical performance standards of the transmitter and associated equipment, the requirements of § 73.317 (a) (2), (3), (4), and (5) shall apply to the main channel and stereophonic subchannel alike, except that where 100 percent modulation is referred to, this figure shall include the pilot subcarrier.

§ 73.330 Frequency and modulation monitors at auxiliary transmitters.

(a) The following shall govern the installation of approved frequency and modulation monitors at auxiliary transmitters of FM broadcast stations in compliance with these rules:

(1) In case the auxiliary transmitter location is at a site different from that of the main transmitter, an approved frequency monitor shall be installed at the auxiliary transmitter except when the frequency of the auxiliary transmitter can be monitored by means of the frequency monitor at the main transmitter. When the auxiliary transmitter is operated without a frequency monitor under this exemption, it shall be monitored by means of the frequency monitor at the main transmitter.

(2) The licensee will be held strictly responsible for any center frequency deviation of the auxiliary transmitter in excess of 2,000 cycles from the assigned frequency, even though exempted by the above from installing an approved frequency monitor.

(3) Installation of an approved modulation monitor at the location of the auxiliary transmitter, when different from that of the main transmitter, is optional with the licensee. However, when it is necessary to operate the auxiliary transmitter beyond two calendar days, a modulation monitor shall be installed and operated at the auxiliary transmitter. The monitor (if taken from the main transmitter) shall be reinstalled at the main transmitter immediately upon resumption of operation of the main transmitter.

(4) In all cases where the auxiliary transmitter and the main transmitter have the same location, the same frequency and modulation monitors may be used for monitoring both transmitters, provided they are so arranged as to be readily switched from one transmitter to the other.

§ 73.331 Requirements for type approval of frequency monitors.

(a) *General requirements.* (1) Any manufacturer desiring to submit a monitor for type approval shall supply the Commission with full specification details (two sworn copies) as well as the test data specified in paragraph (c) of this section. If this information appears to meet the requirements of the rules, shipping instructions will be issued to the manufacturer. The shipping charges to and from the Laboratory at Laurel, Maryland, shall be paid for by the manufacturer. Approval of a monitor will only be given on the basis of the data obtained from the sample monitor submitted to the Commission for test.

(2) In approving a monitor upon the basis of the tests conducted by the Laboratory, the Commission merely recog-

nizes that the type of monitor has the inherent capability of functioning in compliance with the rules, if properly constructed, maintained, and operated. The Commission realizes that the frequency monitor may have limited range over which the visual indicator will determine deviations. Accordingly, it may be necessary that adjunct equipment be used to determine major deviations.

(3) Additional rules with respect to withdrawal of type approval, modification of type approval equipment and limitations of the findings upon which type approval is based are set forth in Part 2, Subpart F, of this chapter.

(b) *General specifications.* The general specifications that frequency monitors shall meet before they will be approved by the Commission are as follows:

(1) The unit shall have an accuracy of at least ±1000 cycles under ordinary conditions (temperature, humidity, power supply variations and other conditions which may affect its accuracy) encountered in FM broadcast stations throughout the United States, for any channel within the FM broadcast band.

(2) The range of the indicating device shall be at least from 2000 cycles below to 2000 cycles above the assigned center frequency.

(3) The scale of the indicating device shall be so calibrated as to be accurately read within at least 100 cycles.

(4) Means shall be provided for adjustment of the monitor indication to agree with an external standard.

(5) The monitor shall be capable of continuous operation and its circuit shall be such as to permit continuous monitoring of the transmitter center frequency.

(6) Operation of the monitor shall have no deleterious effect on the operation of the transmitter or the signal emitted therefrom.

(c) *Tests to be made for approval of FM broadcast frequency monitors.* The manufacturer of a monitor shall submit data on the following at the time of requesting approval:

(1) Constancy of oscillator frequency as measured several times in 1 month.

(2) Constancy of oscillator frequency when subjected to vibration tests which would correspond to the treatment received in shipping, handling and installing the instrument.

(3) Accuracy of readings of the frequency deviation instrument.

(4) Functioning of frequency adjustment device.

(5) Effects on frequency and readings, of the changing of tubes, of voltage variations, and of variations of room temperature through a range not to exceed 10° to 40° C.

(6) Response of indicating instrument to small changes of frequency.

(7) General information on the effect of tilting or tipping or other tests to determine ability of equipment to withstand shipment.

(d) Various other tests may be made or required, such as effects of variation of input from the transmitter depending upon the character of the apparatus.

(e) Tests shall be conducted in such a manner as to approximate actual operating conditions as nearly as possible. The equipment under test shall be operated on any channel in the FM broadcast band.

§ 73.332 Requirements for type approval of modulation monitors.

(a) Any manufacturer desiring to submit a monitor for type approval shall supply the Commission with full specification details (two sworn copies) specified in paragraph (b) of this section. If this information appears to meet the requirements of the rules, shipping instructions will be issued to the manufacturer. The shipping charges to and from the Laboratory at Laurel, Maryland, shall be paid for by the manufacturer. Approval of a monitor will only be given on the basis of the data obtained from the sample monitor submitted to the Commission for test.

(1) In approving a monitor upon the basis of the tests conducted by the Laboratory, the Commission merely recognizes that the type of monitor has the inherent capability of functioning in compliance with the rules, if properly constructed, maintained and operated.

(2) Additional rules with respect to withdrawal of type approval, modification of type approval equipment and limitations on the findings upon which type approval is based are set forth in Part 2, Subpart F, of this chapter.

(b) The specifications that a nonmultiplex modulation monitor shall meet before it will be approved by the Commission are as follows:

(1) A means for insuring that the transmitter input to the modulation monitor is proper.

(2) A modulation peak indicating device that can be set at any predetermined value from 50 to 120 percent modulation (±75 kc/s swing is defined as 100 percent modulation) and for either positive or negative swings (i.e., either above or below transmitter center frequency).

(3) A semi-peak indicator with a meter having the characteristics given below shall be used with a circuit such that peaks of modulation of duration between 40 and 90 milliseconds are indicated to 90 percent of full value and the discharge rate adjusted so that the pointer returns from full reading to 10 percent of zero within 500 to 800 milliseconds. A switch shall be provided so that this meter will read either positive or negative swings.

(i) The characteristics of the indicating meter are: (*a*) *Damping factor.* The damping factor shall be between 16 and 200. (*b*) *Scale.* The meter scale shall be similar in appearance to that of a standard VU meter. The scale length between 0 and 100 percent modulation markings should be at least 2.3 inches. In addition to other markings a small mark for 133 percent modulation and designated as such should be included for the purpose of testing transmitters with 100 kc/s swing.

(4) The accuracy of reading of percentage of modulation shall be within ±5 percent modulation percentage at any percentage of modulation up to 100 percent modulation.

(5) The frequency characteristic curve shall not depart from a straight line more than ±½ db. from 50 to 15,000 cycles. Distortion shall be kept to a minimum.

(6) The monitor shall not absorb appreciable power from the transmitter.

(7) Operation of the monitor shall have no deleterious effect on the operation of the transmitter.

(8) General design, construction, and operation shall be in accordance with good engineering practice.

(c) The modulation monitor may be a part of the frequency monitor.

(d) The specifications that a modulation monitor shall meet before it will be type approved for monitoring stereophonic operation are as follows:

(1) A means for measuring the modulation percentage of the carrier produced by the main channel signal. For this purpose the instrument shall comply with the provisions of paragraph (b) of this section except that no peak preset indicator need be provided, and the accuracy indication shall be ± 5 percent in modulation percentage for all frequencies from 50 to 15,000 cycles per second. The frequency characteristic, in addition to satisfying the modulation accuracy requirement, must be such that the attenuation at 19 kilocycles per second shall be at least 26 decibels, and the attenuation at 23 kilocycles per second and above shall be at least 46 decibels. These ratios are with respect to the minimum response in the frequency range 50 to 15,000 cycles per second.

(2) A means for measuring the modulation percentage of the carrier produced by the stereophonic subcarrier (38 kilocycles per second) and its sidebands. For this purpose the instrument shall comply with the provisions of paragraph (b) of this section except that no peak preset indicator need be provided and the accuracy of the indication shall be within ±5 percent in modulation percentage for frequencies 23 to 53 kilocycles per second. The frequency characteristic, in addition to satisfying the modulation accuracy requirement, must be such that the attenuation at 19 kilocycles per second and 57 kilocycles per second be at least 26 decibels, and at least 46 decibels at 15 kilocycles per second and below, and 59 kilocycles per second and above. All these ratios are with respect to the minimum response in the band from 23 to 53 kilocycles per second.

(3) A means for measuring the modulation percentage of the carrier by the pilot subcarrier (19 kilocycles per second). For this purpose the indicating meter shall have a scale with length of at least 2.3 inches. Markings shall be provided for 6 percent, 8 percent, 10 percent, and 12 percent modulation with the range between 6 percent and 12 percent occupying at least 50 percent of this scale length. The accuracy of reading at the 8 percent and 10 percent limits shall be ± ½ percent in modulation percentage.

(4) A means for measuring total modulation percentage of the carrier by the main channel, stereophonic subchannel, pilot subcarrier, and all SCA subcarriers simultaneously. For this purpose the instrument shall comply with the provisions of paragraph (b) of this section except that the frequency characteristic shall not have more than a one decibel difference for any frequencies from 50 cycles per second to 75 kilocycles per second. The accuracy of the modulation percentage reading must hold when

the modulation consists of complete composite stereophonic signals (main channel, pilot subcarrier and stereophonic subchannel). Left and right signals used to produce this composite signal shall include sinusoidal tones from 50 to 15,000 cycles per second. The peak preset indicator must also respond correctly to tone bursts at repetition rates from one to ten bursts per second with the following composition of the bursts: (i) Ten consecutive cycles of a constant amplitude 10,000 cycles per second sinusoid; and (ii) five consecutive cycles of a constant amplitude 1,000 cycles per second sinusoid. In addition, each response of the peak preset indicator shall persist for a minimum of 2 and a maximum of 4 seconds and be independent of the direction of frequency deviation.

(5) A means for measuring individually the amplitudes of the left and the right stereophonic channels. For this purpose the instrument shall have, for all frequencies in the range 50 to 15,000 cycles per second:

(i) A frequency characteristic permitting a 1 decibel maximum variation.

(ii) A harmonic distortion of 1 percent or less.

(iii) A capability of reading stereophonic channel separation of at least 35 decibels with an accuracy of ±3 decibels.

(iv) An internal means of ensuring that the proper phase relationship exists between the incoming 19 kilocycles per second pilot carrier and regenerated stereophonic subcarrier in the monitor.

(6) A means for accurately indicating cross talk from the main channel and SCA operation into the stereophonic subchannel, and from the stereophonic subchannel into the main channel. (With stereophonic operation, SCA operation shall be considered as from 59 to 75 kilocycles per second.) For this purpose the monitor must have:

(i) A provision for indicating a cross talk ratio of at least 70 decibels.

(ii) A characteristic not exceeding 46 decibels of internal cross talk for any single main channel signal or for any single stereophonic subchannel signal that modulates the main carrier 90 percent.

(iii) A characteristic not exceeding 66 decibels of internal cross talk (with respect to 100 percent modulation) for any SCA operation from 59 to 75 kilocycles per second that modulates the main carrier 10 percent. The SCA cross talk shall be evaluated for the main channel frequency range from 50 to 15,000 cycles per second and the stereophonic subchannel range from 23,000 to 53,000 cycles per second.

NOTE: The meaning of "accurately" appropriate for application of this subparagraph is a matter for future consideration.

(7) The requirements of subparagraphs (5) and (6) of this paragraph contemplate the use of sinusoidal test signals.

(8) A means for accurately indicating a suppression of the stereophonic subcarrier of at least 46 decibels with respect to 100 percent modulation of the carrier. The means must be valid for 90 percent subchannel modulation for signals from 5,000 to 15,000 cycles per second.

(9) When signals are brought out for external metering or monitoring, they shall have all the characteristics stipulated for internal metering purposes, and any loading by external circuitry shall have no effect on the monitor's indications.

(e) The stereophonic subchannel modulation display may be a part of the main channel modulation display. However, if switching of functions is utilized, the peak preset indicator of total modulation must be independent of this switching and afford a continuous display of total modulation.

(f) The specifications that a modulation monitor shall meet before it will be type approved for monitoring SCA operation are as follows:

(1) A means for measuring the modulation percentage of the carrier produced by the main channel signal. For this purpose the instrument shall comply with the provisions of paragraph (b) of this section except that no peak preset indicator need be provided, and the accuracy of indication shall be ±5 percent in modulation percentage for all frequencies from 50 to 15,000 cycles per second. The frequency characteristic, in addition to satisfying the modulation accuracy requirement, must be such that the attenuation from 20 kilocycles per second to 75 kilocycles per second shall be at least 46 decibels with respect to the minimum response in the frequency range 50 to 15,000 cycles per second.

(2) A means for measuring the modulation of the main carrier by each unmodulated subcarrier separated by a

minimum of 5 kilocycles from an adjacent unmodulated subcarrier to an accuracy of one percent in modulation percentage. For SCA subcarriers from 59 to 75 kilocycles per second, the monitor characteristic shall be such as to ignore any signal of 53 kilocycles per second and below, the amplitude of which is +40 decibels with respect to the subcarrier being measured. For SCA subcarriers from 20 to 75 kilocycles per second (no stereophonic service), the monitor characteristic shall be such as to ignore a +40 decibel signal at 15 kilocycles per second or below.

NOTE: Compliance with this requirement will be assumed for monitors that can meet the following test conditions:

(i) For subcarriers from 59 to 75 kc/s, one subcarrier is introduced at a level which modulates the main carrier to any percentage from 1 to 10 percent; a second subcarrier, not less than 5 kc/s removed from the first, is added at a level such that the total modulation of the main carrier by the two subcarriers is 10 percent. The modulation of the main carrier by the first subcarrier shall be indicated to an accuracy of one percent in modulation percentage. If the monitor is intended for two or more subcarriers, each subcarrier shall be indicated to an accuracy of one percent.

(ii) A sinusoidal signal in the range of 50 c/s to 53 kc/s and at a level sufficient to modulate the main carrier 90 percent is added to the two subcarriers. The indications obtained in subdivision (i) of this Note shall not change more than 0.5 percent in modulation percentage.

(iii) For subcarriers from 20 to 75 kc/s, one subcarrier is introduced at a level which modulates the main carrier to any percentage from 3 to 30 percent; a second subcarrier, not less than 5 kc/s removed from the first, is added at a level such that the total modulation of the main carrier by the two subcarriers is 30 percent. The modulation of the main carrier by the first subcarrier shall be indicated to an accuracy of one percent in modulation percentage. If the monitor is intended for two or more subcarriers, each subcarrier shall be indicated to an accuracy of one percent.

(iv) A sinusoidal signal in the range of 50 c/s to 15 kc/s and at a level sufficient to modulate the main carrier 70 percent is added to the two subcarriers. The indications obtained in subdivision (iii) of this Note shall not change more than 0.5 percent in modulation percentage.

(3) A means for measuring total modulation percentage of carrier by the main channel and all SCA subcarriers simultaneously. For this purpose the instrument shall comply with the provisions of paragraph (b) of this section except that the frequency characteristic shall not have more than a one decibel difference for any frequencies from 50 cycles per second to 75 kilocycles per second. The accuracy of the modulation percentage reading must hold when the modulation consists of main channel and SCA subcarrier signals. The peak preset indicator must also respond correctly to tone bursts at repetition rates from one to ten bursts per second with the following composition of the bursts: (i) Ten consecutive cycles of a constant amplitude 10,000 cycles per second sinusoid; and (ii) five consecutive cycles of a constant amplitude 1,000 cycles per second sinusoid. In addition, each response of the peak preset indicator shall persist for a minimum of 2 and a maximum of 4 seconds and be independent of the direction of frequency deviation.

(4) A means for measuring the frequency swing of each subcarrier in the presence of modulation in all channels (main, SCA and stereophonic (if applicable)) to an accuracy of 1 kc/s, under the modulation conditions specified in the application for type approval.

(5) A means for measuring the cross talk of SCA operation (20 to 75 kilocycles per second) into the main channel (50 to 15,000 cycles per second) with an accuracy of 6 decibels. The monitor's internal cross talk characteristic must be at least 66 decibels (100 percent modulation) and the monitor must be capable of indicating at least 70 decibels.

(6) When signals are brought out for external metering or monitoring, they shall have all the characteristics stipulated for internal metering purposes, and any loading by external circuitry shall have no effect on the monitor's indication.

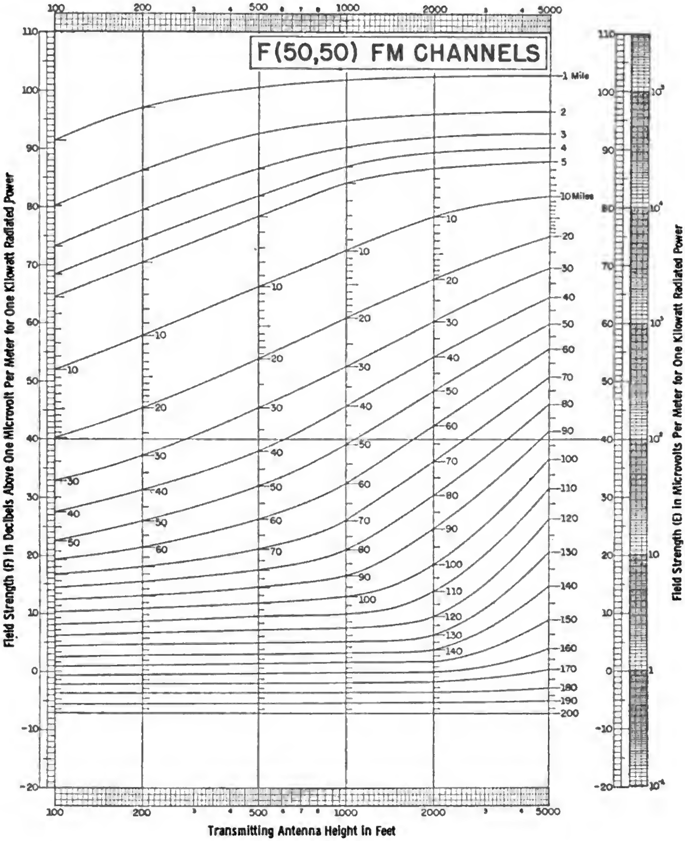
(g) The SCA modulation display may be part of the main channel modulation display but the peak preset indicator of total modulation must be independent of any switching functions and afford a continuous display.

[28 F.R. 13623, Dec. 14, 1963, as amended at 31 F.R. 7907, June 3, 1966; 32 F.R. 4532, Mar 25, 1967; 33 F.R. 2446, Feb. 1, 1968]

§ 73.333 Engineering charts.

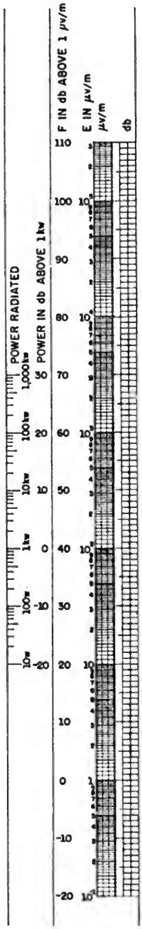
This section consists of the following Figures 1, 2, and 3.

NOTE: The figures reproduced herein, due to their small scale, are not to be used in connection with material submitted to the F.C.C.



FM CHANNELS
ESTIMATED FIELD STRENGTH EXCEEDED AT 50 PERCENT OF THE POTENTIAL
RECEIVER LOCATIONS FOR AT LEAST 50 PERCENT OF THE TIME
AT A RECEIVING ANTENNA HEIGHT OF 30 FEET

FIGURE 1.



Sliding Scale for use with Figure 1, § 73.333

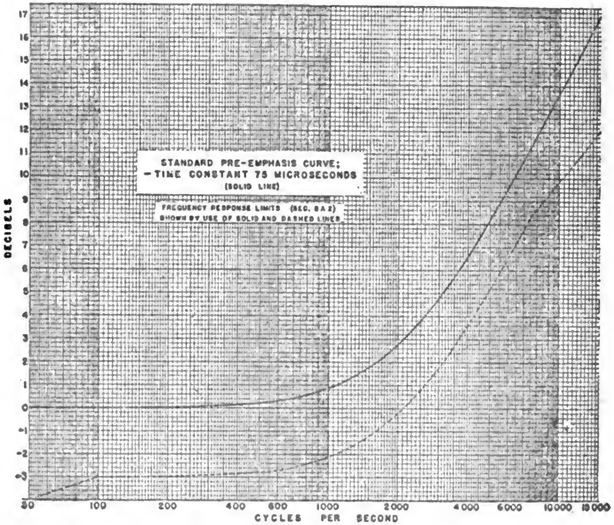
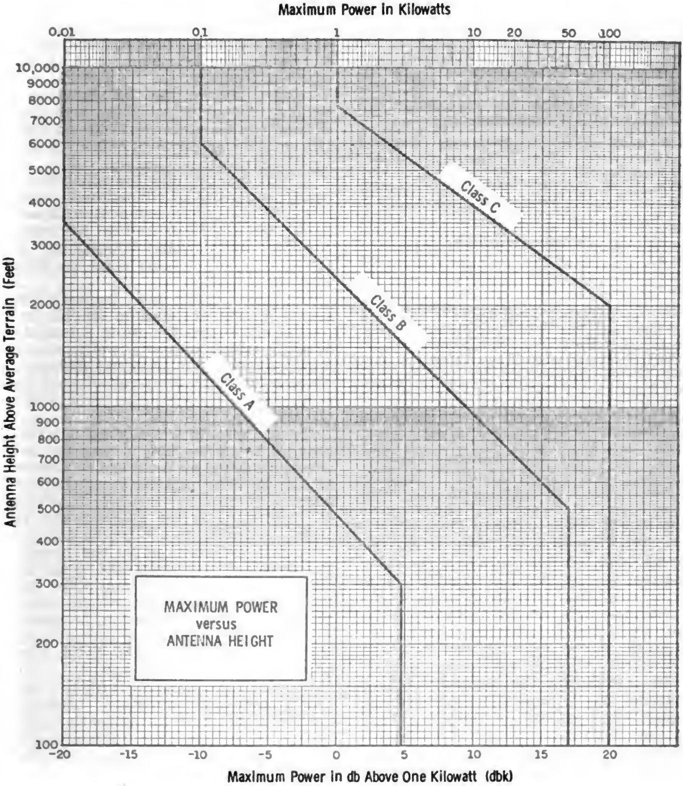

STANDARD PRE-EMPHASIS CURVE;
—TIME CONSTANT 75 MICROSECONDS
(SOLID LINE)
FREQUENCY RESPONSE LIMITS (SEC. 8 A 2)
SHOWN BY USE OF SOLID AND DASHED LINES
DECIBELS
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
30
100
200
400
600
1000
2000
4000
6000
10000
15000
CYCLES PER SECOND

FIGURE 2.



FCC § 73.333 FIGURE 3

[28 F.R. 13623, Dec. 14. 1963, as amended at 35 F.R. 2591, Feb. 5, 1970]

Subpart C—Noncommercial Educational FM Broadcast Stations

SOURCE: The provisions of this Subpart C appear at 28 F.R. 13651, Dec. 14, 1963, unless otherwise noted.

CLASSIFICATION OF STATIONS AND ALLOCATION OF FREQUENCIES

§ 73.501 Channels available for assignment.

(a) The following frequencies, except as provided in paragraph (b) of this section, are available for noncommercial educational FM broadcasting:

Frequency (Mc/s):	*Channel No.*	Frequency (Mc/s):	*Channel No.*
88.1	201	90.1	211
88.3	202	90.3	212
88.5	203	90.5	213
88.7	204	90.7	214
88.9	205	90.9	215
89.1	[1] 206	91.1	216
89.3	207	91.3	217
89.5	208	91.5	218
89.7	209	91.7	219
89.9	210	91.9	220

[1] The frequency 89.1 Mc/s, Channel No. 206 in the New York City metropolitan area, is reserved for the use of the United Nations with the equivalent of an antenna height of 500 feet above average terrain and effective radiated power of 20 kw, and the Commission will make no assignments which would cause objectionable interference with such use.

(b) In Alaska, the frequency band 88–100 Mc/s is allocated exclusively to Government radio services and the non-Government fixed service. The frequencies 88.1 Mc/s through 91.9 Mc/s (Channels 201 through 220, inclusive) will not be assigned in Alaska for use by noncommercial educational FM broadcast stations; however, the frequencies 100.1–107.9 Mc/s (Channels 261 through 300, inclusive) are available for such use.

§ 73.502 State-wide plans.

In considering the assignment of a channel for a noncommercial educational FM broadcast station, the Commission will take into consideration the extent to which each application meets the requirements of any state-wide plan for noncommercial educational FM broadcast stations filed with the Commission, provided that such plans afford fair treatment to public and private educational institutions, urban and rural, at the primary, secondary, higher, and adult educational levels, and appear otherwise fair and equitable.

§ 73.503 Licensing requirements and service.

The operation of, and the service furnished by noncommercial educational FM broadcast stations shall be governed by the following:

(a) A noncommercial educational FM broadcast station will be licensed only to a nonprofit educational organization and upon showing that the station will be used for the advancement of an educational program.

(1) In determining the eligibility of publicly supported educational organizations, the accreditation of their respective state departments of education shall be taken into consideration.

(2) In determining the eligibility of privately controlled educational organizations, the accreditation of state departments of education and/or recognized regional and national educational accrediting organizations shall be taken into consideration.

(b) Each station may transmit programs directed to specific schools in a system or systems for use in connection with the regular courses as well as routine and administrative material pertaining thereto and may transmit educational, cultural, and entertainment programs to the public.

(c) A noncommercial educational FM broadcast station may broadcast programs produced by, or at the expense of, or furnished by persons other than the licensee, if no other consideration than the furnishing of the program and the costs incidental to its production and broadcast are received by the licensee. The payment of line charges by another station network, or someone other than the licensee of a noncommercial educational FM broadcast station, or general contributions to the operating costs of a station, shall not be considered as being prohibited by this paragraph.

(d) Each station shall furnish a nonprofit and noncommercial broadcast service. Noncommercial educational FM broadcast stations are subject to the provisions of § 73.289 to the extent that they are applicable to the broadcast of programs produced by, or at the expense of, or furnished by others; however, no announcements promoting the sale of a product or service shall be broadcast in connection with any program.

NOTE 1: Announcements of the producing or furnishing of programs, or the provision of funds for their production, may be made no more than twice, at the opening and at the close of any program, except that where a program lasts longer than 1 hour an announcement may be made at hourly intervals during the program if the last such announcement occurs at least 15 minutes before the announcement at the close of the program. The person or organization furnishing or producing the program, or providing funds for its production, shall be identified by name only, except that in the case of a commercial company having *bona fide* operating divisions or subsidiaries one of which has furnished the program or funds, the division or subsidiary may be mentioned in addition to or instead of the commercial company. No material beyond the company (or division or subsidiary) name shall be included. Upon request for waiver of this provision, the Commission may authorize the inclusion of brief additional descriptive material only when deemed necessary to avoid confusion with another company having the same or a similar name. No mention shall be made of any product or service with which a commercial enterprise being identified has a connection, except to the extent the name of the product or service is the same as that of the enterprise (or division or subsidiary) and is so included. A repeat broadcast of a particular program is considered a separate program for the purpose of this note.

NOTE 2: Announcements may be made of general contributions of a substantial nature which make possible the broadcast of programs for part, or all, of the day's schedule. Such announcements may be made at the opening and closing of the day or segment, including all of those persons or organizations whose substantial contributions are making possible the broadcast day or segment. In addition, one such general contributor may be identified once during each hour of the day or segment. The provisions of Note 1 of this section as to permissible contents apply to announcements under this note.

NOTE 3: The limitations on credit announcements imposed by Notes 1 and 2 of this section shall not apply to program material, the production of which was completed before January 1, 1971, or to other announcements broadcast before January 1, 1971, pursuant to underwriting agreements entered into before November 30, 1970.

NOTE 4: The provisions of Notes 1 and 2 of this section shall not apply during the broadcast times in which "auctions" are held to finance station operation. Credit announcements during "auction" broadcasts may identify particular products or services, but shall not include promotion of such products or services beyond that necessary for the specific auction purpose.

NOTE 5: The numerical limitations on permissible announcements contained in Notes 1 and 2 of this section do not apply to announcements on behalf of noncommercial, non-profit entities, such as the Corporation for Public Broadcasting, State or regional entities, or charitable foundations.

[28 F.R. 13651, Dec. 14, 1963, as amended at 35 F.R. 7558, May 15, 1970; 35 F.R. 17551, Nov. 14, 1970]

§ 73.504 Zones, classes of stations, use of channels, facilities, and minimum mileage separations between stations.

(a) *Zones.* For the purpose of assignment of noncommercial educational FM stations, the United States is divided into three zones, Zone I, Zone I-A, and Zone II, having the boundaries specified in § 73.205.

(b) *Classes of stations.* Noncommercial educational stations operating on the channels specified in § 73.501 are divided into four classes, as follows:

(1) A Class D educational station is one operating with no more than 10 watts transmitter power output. Class D stations may be assigned in all zones, on any of the channels specified in § 73.501.

(2) Noncommercial educational stations with more than 10 watts transmitter output are classified as Class A, Class B, or Class C, depending on the effective radiated power and antenna height above average terrain, and the zone in which the station's transmitter is located, on the same basis as provided in §§ 73.205, 73.206, and 73.211 for stations on the non-reserved FM channels. Where a station is authorized with more than 3 kilowatts (4.8 dbk) effective radiated power, or coverage greater than that obtained by the equivalent of 3 kilowatts effective radiated power and 300-foot antenna height above average terrain, it is classified as a Class B station if its transmitter is located in Zone I or Zone I-A, and as a Class C station if its transmitter is located in Zone II. Class A stations may be assigned in all zones.

(c) *Use of channels.* All classes of noncommercial educational stations may be assigned to any of the channels set forth in § 73.501.

(d) *Facilities.* (1) No minimum effective radiated power or antenna height is specified for stations operating on the channels specified in § 73.501.

(2) On Channels 218, 219, and 220 specified in § 73.501, no Class B or Class C educational station will be authorized with effective radiated power greater than that specified in § 73.211(b)(1) for the respective class of station, and

the maximum effective radiated power permissible shall also be subject to the provisions of § 73.211(b)(2).

(e) *Minimum mileage separations.* No application for a new station, or change in channel or transmitter site or increase in facilities of an existing station, will be granted unless the proposed facilities will be located so as to meet the adjacent channel mileage separations specified in § 73.207(a) for the class of station involved with respect to assignment on Channels 221, 222, and 223 listed in § 73.201 (except where in the case of an existing station the proposed facilities fall within the provisions of § 73.207(b)).

(f) *Existing stations.* Stations authorized as of September 10, 1962, which do not meet the requirements of paragraphs (d) and (e) of this section, may continue to operate as authorized; but any application to change facilities will be subject to the provisions of this section.

(g) Stations separated in frequency by 10.6 or 10.8 Mc/s (53 or 54 channels) from stations or assignments on commercial channels will not be authorized unless they conform to the following separation table:

Class of stations	*Required spacing (miles)*
A to A	5
B to A	10
B to B	15
C to A	20
C to B	25
C to C	30

[28 F.R. 13651, Dec. 14, 1963, as amended at 30 F.R. 8680, July 9, 1965]

§ 73.505 Standards of good engineering practice.

All noncommercial educational stations operating with more than 10 watts transmitter output power shall be subject to all of the provisions of the FM Technical Standards contained in Subpart B of this part. Class D educational stations shall be subject to the definitions contained in § 73.310 of Subpart B of this part, and also to those other provisions of the FM Technical Standards which are specifically made applicable to them by the provisions of this subpart.

§ 73.506 Noncommercial educational broadcast stations operating on unreserved channels.

Noncommercial educational FM stations which operate on channels listed in § 73.202 rather than § 73.501, but which comply with § 73.503 as to licensing requirements and the nature of the service rendered, shall comply with the provisions of the following sections of Subpart B of this part: §§ 73.201 through 73.213 (Classification of FM Broadcast Stations and Allocation of Frequencies); § 73.254 (Required Transmitter Performance); and such other sections of Subpart B of this part as are made specifically applicable by the provisions of this Subpart C. In all other respects such stations shall be governed by the provisions of this subpart and not Subpart B of this part.

[34 F.R. 17874, Nov. 5, 1969]

ADMINISTRATIVE PROCEDURE

§ 73.514 Cross reference.

See Subpart D of Part 1 of this chapter, for general requirements as to applications, filing of applications and description of application forms, other forms and information to be filed with the Commission, the manner in which applications are processed, and provisions applying to action on applications. See § 1.1111 of Subpart G of that part for the fees to be paid in connection with applications for facilities in the service covered in this subpart.

§ 73.515 Notification of filing of applications.

(a) *Radio Astronomy and Radio Research Installations.* In order to minimize possible harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, West Virginia, and the Naval Radio Research Observatory site at Sugar Grove, Pendleton County, West Virginia, an applicant for authority to construct a new noncommercial educational FM broadcast station or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39°15′ N. on the north, 78°30′ W. on the east, 37°30′ N. on the south, and 80°30′ W. on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P.O. Box #2, Green Bank, West Virginia, 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the Observatory. After receipt of such applications, the Commission will allow a period of twenty (20) days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the twenty-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(b) *Location on Government land.* Applicants proposing to construct a radio station on a site located on land under the jurisdiction of the U.S. Forest Service, U.S. Department of Agriculture, or the Bureau of Land Management, U.S. Department of the Interior, must supply the information and must follow the procedure prescribed by § 1.70 of this chapter.

[28 F.R. 13651, Dec. 14, 1963, as amended at 32 F.R. 2891, Feb. 15, 1967]

§ 73.516 Equipment tests.

(a) During the process of construction of a noncommercial educational FM broadcast station, the permittee, after notifying the Commission and Engineer in Charge of the radio district in which the station is located, may without further authority of the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, the rules and regulations, and the applicable engineering standards.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid.

(d) Inspection of a station will ordinarily be required during the equipment test period and before the commencement of the program test. After construction and after adjustments and measurements have been completed to show compliance with the terms of the construction permit, the technical provisions of the application therefor, the rules and regulations and the applicable engineering standards the permittee should notify the Engineer in Charge of the radio district in which the station is located that it is ready for inspection.

(e) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

§ 73.517 Program tests.

(a) Upon completion of construction of a noncommercial educational FM broadcast station in accordance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations and applicable engineering standards, and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee may request authority to conduct program tests: *Provided,* That such request shall be filed with the Commission at least ten (10) days prior to the date on which it is desired to begin such operation and that the Engineer in Charge of the radio district in which the station is located is notified. (All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the license application.)

(b) Program tests shall not commence until specific Commission authority is received. The Commission reserves the right to change the date of the beginning of such tests, or to suspend or revoke the authority for program tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Unless sooner suspended or revoked program test authority continues valid during Commission consideration of the application for license and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated by final determination upon the application for station license.

(d) All operation under program test authority shall be in strict compliance with the rules governing noncommercial educational FM broadcast stations and in strict accordance with representations made in the application for license pursuant to which the tests were authorized.

(e) The grant of program test authority shall not be construed as approval by the Commission of the application for station license.

§ 73.518 Normal license period.

(a) Initial licenses for noncommercial educational FM stations will ordinarily be issued for a period running until the date specified in this section for the State or territory in which the station is located or, if issued after such date, to the next triennial renewal date determined in accordance with this section; and, when renewed, will normally be renewed for 3 years: *Provided, however,* That, if the Commission finds that the public interest, convenience or necessity will be served thereby, it may issue either an initial license or a renewal thereof for a lesser term. The time of expiration of normally issued initial and renewed licenses will be 3 a.m., local time, on the following dates, and at 3-year intervals thereafter:

(1) For stations located in Iowa and Missouri, February 1, 1968.

(2) For stations located in Minnesota, North Dakota, South Dakota, Montana, and Colorado, April 1, 1968.

(3) For stations located in Kansas, Oklahoma, and Nebraska, June 1, 1968.

(4) For stations located in Texas, August 1, 1968.

(5) For stations located in Wyoming, Nevada, Arizona, Utah, New Mexico, and Idaho, October 1, 1968.

(6) For stations located in California, December 1, 1968.

(7) For stations located in Washington, Oregon, Alaska, Guam, and Hawaii, February 1, 1969.

(8) For stations located in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, April 1, 1969.

(9) For stations located in New Jersey and New York, June 1, 1969.

(10) For stations located in Delaware and Pennsylvania, August 1, 1969.

(11) For stations located in Maryland, District of Columbia, Virginia, and West Virginia, October 1, 1969.

(12) For stations located in North Carolina and South Carolina, December 1, 1969.

(13) For stations located in Florida, Puerto Rico, and Virgin Islands, February 1, 1970.

(14) For stations located in Alabama and Georgia, April 1, 1970.

(15) For stations located in Arkansas, Louisiana, and Mississippi, June 1, 1970.

(16) For stations located in Tennessee, Kentucky, and Indiana, August 1, 1970.

(17) For stations located in Ohio and Michigan, October 1, 1970.

(18) For stations located in Illinois and Wisconsin, December 1, 1970.

NOTE: For the cutoff date for the filing of applications mutually exclusive with, and petitions to deny, renewal applications, see § 1.516(e) of this chapter.

[33 F.R. 4412, Mar. 12, 1968, as amended at 34 F.R. 7967, May 21, 1969]

EQUIPMENT

§ 73.550 Acceptability of broadcast transmitters for licensing.

(a) In order to facilitate the filing of, and action on, applications for station authorizations, transmitters will be accepted for licensing by the Commission under one of the following conditions:

(1) A transmitter may be type-accepted upon the request of any manufacturer of transmitters built in quantity by following the type acceptance procedure set forth in Part 2 of this chapter, provided that the data and information submitted indicates that the transmitter meets the requirements of § 73.317. If accepted, such transmitter will be included on the Commission's "Radio Equipment List". Applicants specifying transmitters included on such a list need not submit detailed descriptions and diagrams where the correct type number is specified, provided that the equipment proposed is identical with that accepted. Copies of this list are available for inspection at the Commission's office in Washington, D.C., and at each of its field offices.

(2) An application specifying a transmitter not included on the "Radio Equipment List" may be accepted upon the request of a prospective licensee submitting with the application for construction permit a complete description of the transmitter, including the circuit diagram, listing of all tubes used, function of each, multiplication in each stage, plate current and voltage applied to each tube, a description of the oscillator circuit together with any devices installed for the purpose of frequency stabilization and the means of varying output power to compensate for power supply voltage variations. However, if this data has been filed with the Commission by a manufacturer in connection with a request for type acceptance, it need not be submitted

with the application for construction permit but may be referred to as "on file". Measurement data for type acceptance made in accordance with subparagraph (1) of this paragraph shall be submitted with the license application.

(3) A transmitter shown on an instrument of authorization by manufacturer and type number, or as a composite, and which was in use prior to June 30, 1955, may continue to be used by the licensee, his successors or assignees, provided such transmitter continues to comply with the rules and regulations.

(4) A permittee may, without further authority, install and utilize a transmitter other than that specifically authorized in its construction permit if such transmitter is listed in the Commission's "Radio Equipment List" as acceptable for the transmitter output power authorized and, if operation under § 73.595 or § 73.596 is included, such transmitter is listed in the said "Radio Equipment List" as acceptable for the appropriate type of operation.

(5) A licensee may, without further authority, install and utilize a transmitter other than that specifically authorized in its station license if the transmitter so installed and so utilized is listed in the Commission's "Radio Equipment List" as acceptable for the transmitter output power authorized and, if operation under § 73.595 or § 73.596 is included, such transmitter is listed in the said "Radio Equipment List" as acceptable for the appropriate type of operation. In the event of such a transmitter substitution, the Commission and the Engineer in Charge of the radio district in which the station is located shall be notified within three days after the date of installation of the transmitter. Such notice shall specify the manufacturer and type number of the transmitter and shall include a certification by the licensee that the transmitter as installed complies with the appropriate technical provisions of this subpart.

(b) Additional rules with respect to withdrawal of type-acceptance, modification of type-accepted equipment and limitations on the findings upon which type acceptance is based are set forth in Part 2 of this chapter.

[28 F.R. 13651, Dec. 14, 1963, as amended at 33 F.R. 15421, Oct. 17, 1968]

§ 73.552 Frequency monitor.

(a) The licensee of each station licensed for transmitter power output above 10 watts shall have in operation, either at the transmitter or at the place where the transmitter is controlled, a frequency monitor of a type approved by the Commission which shall be independent of the frequency control of the transmitter.

NOTE: Approved frequency monitors are included on the Commission's "Radio Equipment List". Copies of this list are available for inspection at the Commission's office in Washington, D.C., and at each of its field offices.

(b) In the event that the frequency monitor becomes defective the station may be operated without the monitor pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission: *Provided*, That:

(1) Appropriate entries shall be made in the maintenance log of the station showing the date and time the monitor was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the monitor is found to be defective and immediately after the repaired or replacement instrument has been installed and is functioning properly.

(3) The frequency of the station shall be compared with an external frequency source of known accuracy at sufficiently frequent intervals to insure that the frequency is maintained within the tolerance prescribed in § 73.568. An entry shall be made in the station log as to the method used and the results thereof.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the above-allowed period, informal request may be filed in accordance with § 1.549 of this chapter with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

(d) The licensee of each noncommercial educational FM broadcast station licensed for transmitter power output of 10 watts or less shall provide for the measurement of the station frequency by a means independent of the frequency control of the transmitter. The station frequency shall be measured (1) when the transmitter is initially installed, (2) at any time the frequency determining elements are changed, and (3) at any time the licensee may have reason to believe the frequency has shifted beyond the tolerance specified by the Commission's rules.

[28 F.R. 13651, Dec. 14, 1963, as amended at 33 F.R. 15422, Oct. 17, 1968]

§ 73.553 Modulation monitors.

(a) The licensee of each station licensed for transmitter power output above 10 watts shall have in operation, either at the transmitter or the place the transmitter is controlled, a modulation monitor of a type approved by the Commission for non-multiplex operation: *Provided,* That: (1) If the station is engaged in stereophonic operation, as contemplated by § 73.596, the licensee shall have in operation a modulation monitor of a type approved by the Commission for monitoring stereophonic operation, and (2) if the station is engaged in operation with a Subsidiary Communications Authorization, as contemplated by § 73.-595, the licensee shall have in operation a modulation monitor of a type approved by the Commission for monitoring SCA operation.

NOTE 1: Approved modulation monitors (non-multiplex, stereophonic and SCA) are included on the Commission's "Radio Equipment List." Copies of this list are available for inspection at the Commission's office in Washington, D.C., and at its field offices.

NOTE 2: The provisions of this subpart shall become effective September 1, 1967, for stereophonic modulation monitors and January 1, 1969, for SCA modulation monitors, except that as to SCA modulation monitors stations which have type-approved monitors on order before January 1, 1969, must have such monitors in operation by April 1, 1969.

(b) In the event that the modulation monitor becomes defective the station may be operated without the monitor pending its repair or replacement for a period not in excess of 60 days: *Provided,* That:

(1) Appropriate entries shall be made in the maintenance log of the station showing the date and time the monitor was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the monitor is found to be defective and immediately after the repaired and replacement monitor has been installed and is functioning properly.

(3) During the period when the station is operated without the modulation monitor the licensee shall provide other suitable means for insuring that the modulation is maintained within the tolerance prescribed in § 73.568.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the above allowed period, informal request may be filed in accordance with § 1.549 of this chapter with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

(d) The licensee of each noncommercial educational FM broadcast station licensed for transmitter power output of 10 watts or less shall provide a percentage modulation indicator or a calibrated program level meter from which a satisfactory indication of the percentage of modulation of the transmitter can be determined.

[28 F.R. 13651, Dec. 14, 1963, as amended at 31 F.R. 7908, June 3, 1966; 33 F.R. 15422, Oct. 17, 1968; 33 F.R. 19016, Dec. 4, 1968]

§ 73.554 Transmitter performance.

(a) The transmitter proper and associated transmitting equipment of each noncommercial educational FM broadcast station licensed for transmitter power output above 10 watts shall be designed, constructed and operated in accordance with § 73.317.

(b) The transmitter proper and associated transmitting equipment of each noncommercial educational FM broadcast station licensed for transmitter power output of 10 watts or less, although not required to meet all requirements of § 73.317, shall be constructed with safety features in accordance with the provisions concerning transmitting equipment at radio and television stations contained in the current National Electrical Code as approved by the American Standards Association, and shall be so operated, tuned, and adjusted that emissions are not radiated outside the authorized band which cause or which are capable of causing interference to the communications of other stations. The audio distortion, audio frequency range, carrier hum, noise level, and other essential phases of the operation which control the external effects, shall at all times be capable of providing satisfactory broadcast service. Studio equipment properly covered by an underwriter's certificate will be considered as satisfying safety requirements.

(c) The licensee of each noncommercial educational FM broadcast station with transmitter output power above 10 watts shall make equipment performance measurements at least once each calendar year: *Provided, however,* That the dates of completion of successive sets of measurements shall be no more than 14 months apart. One set of measurements shall be made during the 4-month period preceding the filing date of the application for renewal of station license. Equipment performance measurements for auxiliary transmitters are not required. Equipment performance measurements shall be made with equipment adjusted for normal program operation and shall include all circuits between the main studio microphone terminals and the antenna circuit, including telephone lines, preemphasis circuits and any equalizers employed, except for microphones, and without compression if a compression amplifier is installed. The measurement program shall yield the following information:

(1) Audio frequency response from 50 to 15,000 hertz (Hz) for approximately 25, 50, and 100 percent modulation. Measurements shall be made on at least the following audio frequencies: 50, 100, 400, 1000, 5000, 10,000, and 15,000 Hz. The frequency response measurements should normally be made without deemphasis; however, standard 75 microsecond deemphasis may be employed in the measuring equipment or system provided the accuracy of the deemphasis circuit is sufficient to insure that the measured response is within the prescribed limits.

(2) Audio frequency harmonic distortion for 25, 50, and 100 percent modulation for the fundamental frequencies of 50, 100, 400, 1000, and 5000 Hz. Audio frequency harmonics for 100 percent modulation for fundamental frequencies of 10,000 and 15,000 Hz. Measurements shall normally include harmonics to 30,000 Hz. The distortion measurements shall be made employing 75 microsecond deemphasis in the measuring equipment or system.

(3) Output noise level (frequency modulation) in the band of 50 to 15,000 Hz in decibels (dB) below the audio frequency level representing a frequency swing of 75 kHz. The noise measurements shall be made employing 75 microsecond deemphasis in the measuring equipment or system.

(4) Output noise level (amplitude modulation) in the band of 50 to 15,000 Hz in dB below the level representing 100 percent amplitude modulation. The noise measurements shall be made employing 75 microsecond deemphasis in the measuring equipment or system.

(d) The data required by paragraph (c) of this section, together with a description of instruments and procedure signed by the engineer making the measurements, shall be kept on file at the transmitter and retained for a period of 2 years, and shall be made available during that time upon request to any duly authorized representative of the Federal Communications Commission.

[28 F.R. 13651, Dec. 14, 1963, as amended at 33 F.R. 15422, Oct. 17, 1968; 37 F.R. 11864, June 15, 1972]

§ 73.555 Auxiliary transmitter.

Upon showing that a need exists for the use of an auxiliary transmitter in addition to the regular transmitter of a broadcast station, a license therefor may be issued: *Provided,* That:

(a) An auxiliary transmitter may be installed either at the same location as the main transmitter or at another location.

(b) A licensed operator shall be in control whenever an auxiliary transmitter is placed in operation.

(c) The auxiliary transmitter shall be maintained so that it may be placed into immediate operation at any time for the following purposes:

(1) The transmission of the regular programs upon the failure of the main transmitter.

(2) The transmission of regular programs during maintenance or modification work on the main transmitter, necessitating discontinuance of its operation for a period not to exceed 5 days. (This includes the equipment changes which may be made without authority as set forth elsewhere in the rules and regulations or as authorized by the Commission by letter or by construction permit. Where such operation is required for periods in excess of 5 days, request therefor shall be in accordance with § 1.542 of this chapter.)

(3) Upon request by a duly authorized representative of the Commission.

(d) The auxiliary transmitter shall be tested at least once each week to determine that it is in proper operating condition and that it is adjusted to the proper frequency, except that in case of operation in accordance with paragraph (c) of this section during any week, the test in that week may be omitted provided the operation under paragraph (c) is satisfactory. A record shall be kept of the time and result of each test. Such records shall be retained for a period of two years.

(e) The auxiliary transmitter shall be equipped with satisfactory control equipment which will enable the maintenance of the frequency emitted by the station within the limits prescribed by the regulations in this part.

(f) The operating power of an auxiliary transmitter may be less than the authorized power of the main transmitter, but in no event shall it be greater than such power.

§ 73.556 Alternate main transmitters.

The licensee of a noncommercial educational FM broadcast station may be licensed for alternate main transmitters provided that a technical need for such alternate transmitters is shown (such as licensees maintaining 24-hour schedule and needing alternate operation for maintenance, or where developmental work requires alternate operation) and that the following conditions are met:

(a) Both transmitters are located at the same place.

(b) Both transmitters shall have the same power rating.

(c) Both transmitters shall meet the requirements of § 73.554.

§ 73.557 Changes in equipment and antenna system.

Licensees of noncommercial educational FM broadcast stations shall observe the following provisions with regard to changes in equipment and antenna system:

(a) No changes in equipment shall be made:

(1) That would result in the emission of signals outside of the authorized channel.

(2) That would result in the external performance of the transmitter being in disagreement with § 73.554.

(b) Specific authority, upon filing formal application (FCC Form 340) therefor, is required for a change in service area or for any of the following changes:

(1) Changes involving an increase or decrease in the power rating of the transmitter.

(2) A replacement of the transmitter as a whole, unless such transmitter is one which may be installed and utilized in accordance with the provisions of § 73.550(a)(5).

(3) Change in the location of the transmitting antenna.

(4) Change in antenna system, including transmission line.

(5) Change in location of main studio, if it is proposed to move the main studio to a different city from that specified in the license.

(6) Change in the power delivered to the antenna.

(7) Change in frequency control and/or modulation system.

(c) Other changes, except as above provided for in this section, may be made at any time without the authority of the Commission, provided that the Commission shall be promptly notified thereof and such changes shall be shown in the next application for renewal of license.

[28 F.R. 13651, Dec. 14, 1963, as amended at 29 F.R. 1329, Jan. 25, 1964; 32 F.R. 11797, Aug. 16, 1967]

§ 73.558 Indicating instruments.

(a) Each noncommercial FM broadcast station licensed for transmitter power above 10 watts shall be equipped with indicating instruments, which conform with the specifictions set forth in § 73.320 for measuring the direct plate voltage and current of the last radio stage and the transmission line radio frequency current, voltage, or power.

(b) In the event that any one of these indicating instruments becomes defective when no substitute which conforms with the required specifications is available, the station may be operated without the defective instrument pending its repair or replacement for a period not in excess of 60 days: *Provided*, That:

(1) Appropriate entries shall be made in the maintenance log of the station showing the date and time the meter was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the instrument is found to be defective and immediately after the repaired or replaced instrument has been installed and functioning properly.

(3) If the defective instrument is a plate voltmeter or plate ammeter in the last radio stage, the operating power shall be maintained by means of the radio frequency transmission line meter.

(c) If conditions beyond the control of the licensee prevent the restoration of the meter to service within the above allowed period, informal request may be filed in accordance with § 1.549 of this chapter with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

TECHNICAL OPERATION AND OPERATORS

§ 73.561 Operating schedule.

Noncommercial educational FM broadcast stations are not required to operate on a regular schedule and no minimum number of hours of operation is specified; but the hours of actual operation during a license period shall be taken into consideration in considering the renewal of noncommercial educational FM broadcast licenses wherever it appears that the channels available for such stations are insufficient to meet the demand.

§ 73.562 Experimental operation.

(a) The period between 12 midnight and 6 a.m., prevailing local time, may be used for experimental purposes in testing and maintaining apparatus by the licensee of any noncommercial educational FM broadcast station on its assigned frequency and not in excess of its authorized power, without specific authorization from the Commission.

(b) FM broadcast stations may (with prior notification to the Commission and the Engineer in Charge of the radio district in which the station is located) test, maintain, and adjust the apparatus at the station during other time periods; and may (upon informal application) conduct technical experimentation directed to the improvement of technical phases of operation during other time periods, and for such purposes may utilize a signal other than the standard FM signal, subject to the following conditions:

(1) That emissions outside the authorized bandwidth shall comply with § 73.317(a) and that no interference is caused to the transmissions of other FM broadcast stations.

(2) No charges either direct or indirect shall be made by the licensee of a noncommercial educational FM broadcast station for the production or transmission of programs when conducting technical experimentation.

[35 F.R. 11402, July 16, 1970]

§ 73.563 Station inspection.

The licensee of any noncommercial educational FM broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 73.564 Station and operator licenses; posting of.

(a) The station license and any other instrument of station authorization shall be posted in a conspicuous place and in such manner that all terms are visible at the place the licensee considers to be the principal control point of the transmitter. At all other control points listed on the station authorization, a photocopy of the station license and other instruments of station authorization shall be posted.

(b) The original operator license, or FCC Form 759, of each station operator shall be posted at the place where he is on duty as an operator.

§ 73.565 Operator requirements.

(a) One or more operators holding a radio operator license or permit of a grade specified in this section shall be in actual charge of the transmitting system, and shall be on duty either at the transmitter location or at the remote control point. If operation by remote control has not been authorized, the transmitter, required monitors and other required metering equipment shall be readily accessible, clearly visible, and located sufficiently close to the operator at the normal operating position that deviations from normal indications of required instruments can be observed readily. If operation by remote control is authorized, the required controls and instruments shall be readily accessible, clearly visible, and located sufficiently close to the operator at the normal operating position that deviations from normal indications of required instruments can be observed readily.

(b) With the exceptions set forth in paragraph (g) of this section, adjustments of the transmitting system, and inspection, maintenance and required equipment performance measurements shall be performed only by an operator holding the class of license specified below:

(1) A first-class radiotelephone operator license if the station is authorized to operate with transmitter power output of more than 1 kilowatt.

(2) A first-class or second-class radiotelephone operator license if the station is authorized to operate with transmitter power output of more than 10 watts but not in excess of 1 kilowatt.

(3) A first-class or second-class radiotelephone or radiotelegraph operator license if the station is authorized to operate with transmitter power output of not more than 10 watts.

(c) The operators specified in paragraph (b) of this section shall perform transmitter maintenance and shall correct conditions of improper operation beyond the scope of authority of the lesser grade operator on duty. If the services of the operator or the operators indicated in paragraph (b) of this section are on a contract, part-time basis, a signed copy of the contract shall be kept in the files of the station and shall be made available for inspection upon request by an authorized representative of the Commission. A signed copy of the contract shall be forwarded to the Engineer-in-Charge of the radio district in which the station is located within three (3) days after the contract is signed.

(d) A noncommercial educational FM station with authorized transmitter power in excess of 25 kilowatts may employ first-class radiotelephone operators, second-class operators or operators with the third-class permits endorsed for broadcast station operation for routine operation of the transmitting system if the station has in full-time employment at least one first-class radiotelephone operator and complies with the provisions of paragraph (e) of this section and the following:

(1) The licensee shall designate one first-class radiotelephone operator as the chief operator, who, together with the licensee, shall be responsible for the technical operation of the station. The station licensee shall notify the engineer in charge of the radio district in which the station is located of the name and license number of the designated chief operator. Such notification shall be by letter within three (3) days of such designation. A copy of the notification shall be posted with the chief operator's license.

(2) An operator designated as chief operator for one station may not be so designated concurrently at any other noncommercial educational FM broadcast station.

(3) The station licensee shall vest such authority in, and afford such facilities to the chief operator as may be necessary to insure that the chief operator's primary responsibility for the proper technical operation of the station may be discharged efficiently.

(4) At such times as a regularly designated chief operator is unavailable or unable to act as chief operator (e.g., vacations, sickness), the station licensee shall designate another first-class radiotelephone operator as acting chief operator on a temporary basis. Within 3 days of the date such action is taken, the engineer in charge of the radio district in which the station is located shall be notified by the licensee by letter of the name and license number of the acting chief operator, and shall be notified by letter, again within 3 days of the date when the regularly designated chief operator returns to duty.

(5) The designated chief operator may serve as a routine duty transmitter operator at any station only to the extent that it does not interfere with the efficient discharge of his responsibilities as listed below.

(i) The inspection and maintenance of the transmitting system, including the antenna system and required monitoring equipment.

(ii) The accuracy and completeness of entries in the maintenance log.

(iii) The supervision and instruction of all other station operators in the performance of their technical duties.

(iv) A review of completed operating logs to determine whether technical operation of the station has been in accordance with the rules and terms of the station authorization. After review, the chief operator shall sign the log and indicate the date of such review. If the review of the operating logs indicates technical operation of the station is in violation of the rules or terms of the station authorization, he shall promptly initiate corrective action. The review of each day's operating logs shall be made within 24 hours, except that, if the chief operator is not on duty during a given 24-hour period, the logs must be reviewed within 2 hours after his next appearance for duty. In any case, the time before review cannot exceed 72 hours.

(e) Subject to the conditions set forth in paragraphs (c) and (d) of this section, routine operation of the transmitting apparatus may be performed by an operator holding a second-class license or third-class permit endorsed for broadcast station operation. Unless, however, performed under the immediate and personal supervision of an operator holding a first-class radiotelephone license, an operator holding a second-class license or third-class permit endorsed for broadcast station operation, may make adjustments only of external controls as follows:

(1) Those necessary to turn the transmitter on and off;

(2) Those necessary to compensate for voltage fluctuations in the primary power supply;

(3) Those necessary to maintain modulation levels of the transmitter within prescribed limits.

(f) It is the responsibility of the station licensee to insure that each operator is fully instructed in the performance of all of the above adjustments, as well as in other required duties, such as reading meters and making log entries. Printed step-by-step instructions for those adjustments which the lesser grade operator is permitted to make, and a tabulation or chart of upper and lower limiting values of parameters required to be observed and logged, shall be posted at the operating position. The emissions of the station shall be terminated immediately whenever the transmitting system is observed operating beyond the posted parameters, or in any other manner inconsistent with the rules or the station authorization, and the above adjustments are ineffective in correcting the condition of improper operation, and a first-class radiotelephone operator is not present.

(g) The operator on duty at the transmitter site or remote control point, may, at the discretion of the licensee and the chief operator, if any, be employed for other duties or for the operation of another radio station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such other stations: *Provided, however,* That such other duties shall not interfere with the proper operation of the transmitting system and keeping of required logs.

(h) At all noncommercial educational FM broadcast stations, a complete inspection of the transmitting system and required monitoring equipment in use shall be made by an operator holding a first-class radiotelephone license at least once each day, 5 days each week, with an interval of not less than 12 hours between successive inspections. This inspection shall include such tests, adjustments, and repairs as may be necessary to insure operation in conformance with the provisions of this subpart and the current station authorization: *Provided,* That if the transmitter power output is in excess of 10 watts, but not greater than 1 kilowatt, an operator holding a second-class radiotelephone license may perform the required inspection: *Provided, further,* That if the transmitter power output is 10 watts or less, no such daily inspection need be made, although this shall in no way relieve such stations from the duty to operate in conformance with the provisions of this subpart and the current station authorization.

[37 F.R. 11547, June 8, 1972]

§ 73.566 Facsimile broadcasting and multiplex transmission.

(a) Noncommercial educational FM broadcast stations may transmit simplex facsimile in accordance with transmission standards set forth in § 73.318 during periods not devoted to FM aural broadcasting. Such transmissions may not exceed one hour during the period between 7 a.m. and midnight (no limit is placed upon the hours between midnight and 7 a.m.). The Commission shall be notified by the licensee of the noncommercial educational FM broadcast station of its intent to transmit such facsimile.

(b) Noncommercial educational FM broadcast stations may, upon securing authorization from the Commission, transmit multiplex facsimile in accordance with transmission standards set forth in § 73.318: *Provided,* That the transmission of such facsimile does not reduce the quality of the aural program simultaneously transmitted by the licensee below that required by the FM Technical Standards in Subpart B of this part and that no degradation of such aural programs will result from such facsimile transmissions when received on FM receivers not equipped with filters or other additional equipment.

§ 73.567 Operating power; determination and maintenance of.

(a) *Determination.* The operating power of each station shall be determined by either the direct or indirect method.

(1) Using the direct method, the power shall be measured at the output terminals of the transmitter while operating into a dummy load of substantially zero reactance and a resistance equal to the transmission line characteristic impedance. The transmitter shall be unmodu-

lated during this measurement. If electrical devices are used to determine the power output, such devices shall permit determination of this power to within an accuracy of ±5 percent of the power indicated by the full scale reading of the electrical indicating instrument of the device. If temperature and coolant flow indicating devices are used to determine the power output, such devices shall permit determination of this power to within an accuracy of 4 percent of measured average power output. During this measurement the direct plate voltage and current of the last radio stage and the transmission line meter shall be read and compared with similar readings taken with the dummy load replaced by the antenna. These readings shall be in substantial agreement.

(2) Using the indirect method, the operating power is the product of the plate voltage (E_p) and the plate current (I_p) of the last radio stage, and an efficiency factor, F, as follows:

$$\text{Operating power}=E_p \times I_p \times F$$

(3) The efficiency factor, F, shall be established by the transmitter manufacturer for each type of transmitter for which he submits data to the Commission, and shall be shown in the instruction books supplied to the customer with each transmitter. In the case of composite equipment, the factor F shall be furnished to the Commission with a statement of the basis used in determining such factor.

(b) *Maintenance.* The operating power of stations licensed for transmitter power output greater than 10 watts shall be maintained in accordance with subparagraph (1) of this paragraph and the operating power of stations licensed for transmitter output power of 10 watts or less shall be maintained in accordance with subparagraph (2) of this paragraph.

(1) The operating power of stations licensed for transmitter output power greater than 10 watts shall be maintained as near as practicable to the authorized power and shall not be less than 90 percent nor greater than 105 percent of authorized power except as indicated in paragraph (c) of this section.

(i) When determined by the direct method, the operating power of the transmitter shall be monitored by a transmission line meter which reads proportional to the voltage, current, or power at the output terminals of the transmitter, the meter to be calibrated at intervals not exceeding 6 months. The calibration shall cover, as a minimum, the range from 90 to 105 percent of authorized power and the meter shall provide clear indications which will permit maintaining the operating power within the prescribed tolerance or the meter shall be calibrated to read directly in power units.

(2) Stations licensed to operate with a transmitter output power of 10 watts or less may be operated at less than authorized power but in no event shall the operating power be greater than 5 percent above the authorized power. The transmitter of each such station shall be so maintained as to be capable of operation at maximum licensed power.

(c) *Reduced power.* If a station licensed for transmitter power output greater than 10 watts finds it impossible to operate with authorized power, the station may operate with reduced power for a period not to exceed 10 days. In the event the period of reduced power operation exceeds 10 days, the Commission and the Engineer in Charge of the radio district in which the station is located shall be notified in writing on the eleventh day and shall also be notified when operation with authorized power is resumed.

§ 73.568 Modulation.

The percentage of modulation of all stations shall be maintained as high as possible consistent with good quality of transmission and good broadcast practice and in no case less than 85 percent or more than 100 percent on peaks of frequent recurrence during any selection which normally is transmitted at the highest level of the program under consideration.

§ 73.569 Frequency tolerance.

(a) The center frequency of each noncommercial educational FM broadcast station licensed for transmitter power output of 10 watts or less shall be maintained within 3,000 cycles of the assigned center frequency.

(b) The center frequency of each noncommercial educational FM broadcast station licensed for transmitter power output above 10 watts shall be maintained within 2,000 cycles of the assigned center frequency.

§ 73.570 Antenna structure, marking and lighting.

The provisions of Part 17 of this chapter (Contruction, Marking, and Lighting of Antenna Structures) require that certain antenna structures be painted and/or lighted in accordance with the provisions of that part. Where the antenna structure of a facility authorized under this subpart is required to be painted or lighted, see §§ 17.47 through 17.53 of this chapter.

[33 F.R. 15422, Oct. 17, 1968]

§ 73.571 Discontinuance of operation.

The licensee of each station shall notify the Commission in Washington, D.C., and the Engineer in Charge of the radio district in which the station is located of permanent discontinuance of operation at least two days before operation is discontinued. The licensee shall, in addition, immediately forward the station license and other instruments of authorization to the Washington, D.C., office of the Commission for cancellation.

§ 73.572 Remote control authorization.

(a) An application to operate a station by remote control, to add a remote control point, or to change the location of a remote control point shall be made on FCC Form 301-A, except that:

(1) A request to operate a new station by remote control may be included in the application (FCC Form 301) for construction permit or modification of construction permit.

(2) A request to change a remote control point to a new studio location beyond the corporate limits of the community to which the station is assigned and at a point other than the authorized transmitter site may be included in the application (FCC Form 301) for authority to change the main studio location.

(3) No application need be filed to change a remote control point to an authorized main studio location within the corporate limits of the community to which th station is assigned or to its authorized transmitter site, or to delete a remote control point. However, any such change shall be reported to the Commission and to the Engineer in Charge of the radio district in which the station is located.

(b) An authorization for remote control will be issued only after a satisfactory showing has been made, including, among other things, the location of the remote control point(s).

[32 F.R. 11797, Aug. 16, 1967]

§ 73.573 Remote control operation.

(a) Operation by remote control shall be subject to the following conditions:

(1) The equipment at the operating and transmitting positions shall be so installed and protected that it is not accessible to or capable of operation by persons other than those duly authorized by the licensee.

(2) The control circuits from the operating position to the transmitter shall provide positive on and off control and shall be such that open circuits, short circuits, grounds or other line faults will not actuate the transmitter and any fault causing loss of such control will automatically place the transmitter in an inoperative position.

(3) A malfunction of any part of the remote control equipment and associated line circuits resulting in improper control or inaccurate meter readings shall be cause for the immediate cessation of operation by remote control.

(4) Control and monitoring equipment shall be installed so as to allow the licensed operator at the remote control point to perform all the functions in a manner required by the Commission's rules.

(b) All stations, whether operating by remote control or direct control, shall be equipped so as to be able to follow the Emergency Action Notification procedures described in § 73.932.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318) [28 F.R. 13651, Dec. 14, 1963, as amended at 33 F.R. 15422, Oct. 17, 1968]

OTHER OPERATING REQUIREMENTS

§ 73.581 General requirements relating to logs.

(a) The licensee or permittee of each noncommercial Educational FM broadcast station shall maintain program, operating and maintenance logs as set forth in §§ 73.582, 73.583, and 73.584. Each log shall be kept by the station employee or employees (or contract operator) competent to do so, having actual knowledge of the facts required, who in the case of program and operating logs shall sign the appropriate log when starting duty, and again when going off duty.

(b) The logs shall be kept in an orderly and legible manner, in suitable form, and in such detail that the data required for the particular class of station concerned is readily available. Key letters or abbreviations may be used if proper meaning or explanation is contained elsewhere in the log. Each sheet shall be numbered and dated. Time entries shall be made in local time.

(c) No log or preprinted log or schedule which upon completion becomes a log, or portion thereof shall be erased, obliterated, or willfully destroyed within the period of retention provided by the provisions of this part. Any necessary correction shall be made only pursuant to §§ 73.582, 73.583, and 73.584, and only by striking out the erroneous portion, or by making a corrective explanation on the log, or attachment to it as provided in those sections.

(d) Entries shall be made in the logs as required by §§ 73.582, 73.583, and 73.584. Additional information such as that needed for the cuing of automatic equipment may be entered on the logs. Such additional information, so entered shall not be subject to the restrictions and limitations in the Commission's rules on the making of corrections and changes in logs.

[28 F.R. 13651, Dec. 14, 1963, as amended at 31 F.R. 752, Jan. 20, 1966; 33 F.R. 4412, Mar. 12, 1968]

§ 73.582 Program log.

(a) The following entries shall be made in the program log:

(1) An entry of the time each station identification announcement (call letters and location) is made.

(2) An entry briefly describing each program broadcast, such as "music," "drama," "speech," etc., together with the name or title thereof and the sponsor's name, with the time of the beginning and ending of the complete program. If a mechanical record is used, the entry shall show the exact nature thereof, such as "record," "transcription," etc., and the time it is announced as a mechanical reproduction. If a speech is made by a political candidate, the name and political affiliations of such speaker shall be entered.

(b) No provision of this section shall be construed as prohibiting the recording or other automatic maintenance of data required for program logs. However, where such automatic logging is used, the licensee must comply with the following requirements:

(1) The licensee, whether employing manual or automatic logging or a combination thereof, must be able accurately to furnish the Commission with all information required to be logged;

(2) Each recording, tape, or other means employed shall be accompanied by a certificate of the operator or other responsible person on duty at the time or other duly authorized agent of the licensee, to the effect that it accurately reflects what was actually broadcast. Any information required to be logged which cannot be incorporated in the automatic process shall be maintained in a separate record which shall be similarly authenticated.

(3) The licensee shall extract any required information from the recording for the days specified by the Commission or its duly authorized representative and submit it in written log form, together with the underlying recording, tape or other means employed.

(c) Program logs shall be changed or corrected only in the manner prescribed in § 73.581(c) and only in accordance with the following:

(1) *Manually kept log.* Where, in any program log, or preprinted program log, or program schedule which upon completion is used as a program log, a correction is made before the person keeping the log has signed the log upon going off duty, such correction, no matter by whom made, shall be initialed by the person keeping the log prior to his signing of the log when going off duty, as attesting to the fact that the log as corrected is an accurate representation of what was broadcast. If corrections or additions are made on the log after it has been so signed, explanation must be made on the log or on an attachment to it, dated and signed by either the person who kept the log, the station program director, or manager, or an officer of the licensee.

[28 F.R. 13651, Dec. 14, 1963, as amended at 31 F.R. 752, Jan. 20, 1966]

§ 73.583 Operating log.

(a) The following entries shall be made in the operating log by the properly licensed operator in actual charge of the transmitting apparatus only.

(1) An entry of the time the station begins to supply power to the antenna and the time it stops.

(2) An entry of each interruption of the carrier wave, where restoration is not automatic, its cause and duration followed by the signature of the person restoring operation (if licensed operator other than the licensed operator on duty).

(3) For each station licensed for transmitter power output above 10 watts, an entry, at the beginning of operation and at intervals not exceeding one-half hour, of the following (actual readings

observed prior to making any adjustments to the equipment) and, when appropriate, an indication of corrections made to restore parameters to normal operating values:

(i) Operating constants of last radio stage (total plate voltage and plate current).

(ii) RF transmission line meter reading.

(iii) Frequency monitor reading.

(4) Any other entries required by the instrument of authorization or the provisions of this part.

(5) The entries required by § 17.49 (a), (b) and (c) of this chapter concerning daily observations of tower lights.

(6) An entry, where applicable, describing the results obtained in determining the pilot subcarrier frequency for stereophonic broadcasting.

(b) Automatic devices accurately calibrated and with appropriate time, date and circuit functions may be utilized to record the entries in the operating log: *Provided*, That:

(1) They do not affect the operation of circuits or accuracy of indicating instruments of the equipment being recorded;

(2) The recording devices have an accuracy equivalent to the accuracy of the indicating instruments;

(3) The calibration is checked against the original indicators at least once a week and the results noted in the maintenance log;

(4) Provision is made to actuate automatically an aural alarm circuit located near the operator on duty if any of the automatic log readings are not within the tolerances or other requirements specified in the rules or instrument of authorization;

(5) Unless the alarm circuit operates continuously, devices which record each parameter in sequence must read each parameter at least once during each 10-minute period and clearly indicate the parameter being recorded;

(6) The automatic logging equipment is located at the remote control point if the transmitter is remotely controlled, or at the transmitter location if the transmitter is manually controlled;

(7) The automatic logging equipment is located in the near vicinity of the operator on duty and is inspected by him periodically during the broadcast day; and

(8) The indicating equipment conforms to the requirements of § 73.320 except that the scales need not exceed 2 inches in length. Arbitrary scales may not be used.

(c) In preparing the operating log, original data may be recorded in rough form and later transcribed into the log, but in such a case all portions of the original memoranda shall be preserved as a part of the complete log.

(d) Operating logs shall be changed or corrected only in the manner prescribed in § 73.581(c) and only in accordance with the following:

(1) *Manually kept log.* Any necessary corrections in a manually kept operating log shall be made only by the person making the original entry who shall make and initial each correction prior to signing the log when going off duty in accordance with § 73.581(a). If corrections or additions are made on the operating log after it has been so signed explanation must be made on the log or on an attachment to it, dated and signed by either the operator who kept the log, the station technical supervisor or an officer of the licensee.

(2) *Automatic logging.* No automatically kept operating log shall be altered in any way after entries have been recorded. Any errors or omissions found in an automatically kept operating log shall be noted and explained in a memorandum signed by the operator on duty (who, under the provisions of paragraph (b)(7) of this section, is required to inspect the automatic equipment) or by the station technical supervisor or an officer of the licensee. Such memorandum shall be affixed to the original log in question.

(e) If required by § 73.565(d)(5)(iv), each completed operating log shall bear a signed and dated notation by the station's chief operator of the results of the review of that log.

[28 F.R. 13651, Dec. 14, 1963, as amended at 29 F.R. 14118, Oct. 14, 1964; 31 F.R. 752, Jan. 20, 1966; 31 F.R. 7909, June 3, 1966; 33 F.R. 19821, Dec. 27, 1968; 37 F.R. 11548, June 8, 1972]

§ 73.584 Maintenance log.

(a) The following entries shall be made in the maintenance log:

(1) An entry each week of the time and result of test of auxiliary transmitter.

(2) A notation of all frequency checks and measurements made independently of the frequency monitor and of the cor-

relation of these measurements with frequency monitor indications.

(3) A notation each week of the calibration check of automatic recording devices as required by § 73.583(b)(3).

(4) An entry of the date and time of removal from and restoration to service of any of the following equipment in the event it becomes defective:

(i) Modulation monitor.

(ii) Frequency monitor.

(iii) Final stage plate voltmeter.

(iv) Final stage plate ammeter.

(v) Transmission line radio frequency voltage, current, or power meter.

(5) The entries required by 17.49(d) of this chapter concerning quarterly inspections of the condition of tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(6) Entries shall be made so as to describe fully any experimental operation pursuant to § 73.562.

(7) Any other entries required by the current instrument of authorization of the station and the provisions of this subpart.

(b) Upon completion of the inspection required by § 73.565(e), the inspecting operator shall enter a signed statement that the required inspection has been made, noting in detail the tests, adjustments, and repairs which were accomplished in order to assure operation in accordance with the provisions of this subpart and the current instrument of authorization of the station. The statement shall also specify the amount of time, exclusive of travel time to and from the transmitter, which was devoted to such inspection duties. If complete repair could not be effected, the statement shall set forth in detail the items of equipment concerned, the manner and degree in which they are defective, and the reasons for failure to make satisfactory repairs.

(c) The inspecting operator shall sign and date the maintenance log at the conclusion of each inspection. In preparing the maintenance log, original data may be recorded in rough form and later transcribed into the log, but in such cases all portions of the original memorandum shall be preserved as a part of the complete log.

(d) Any necessary corrections in the maintenance log shall be made only by the inspecting operator who shall initial and date all changes prior to signing the log. If corrections or additions are made on the log after the log has been so signed, explanation must be made the subject of a separate memorandum, dated and signed by the operator who made the entry in question or the station technical supervisor or by an officer of the licensee. Such memorandum shall explain fully the circumstances surrounding the errors or ambiguities, and shall be affixed to the original log in question. If written and signed by other than the inspecting operator who made the entry the memorandum shall contain a satisfactory explanation of why such signature is lacking.

[31 F.R. 752, Jan. 20, 1966, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 73.585 Retention of logs.

Logs of noncommercial educational FM broadcast stations shall be retained by the licensee or permittee for a period of 2 years: *Provided, however*, That logs involving communications incident to a disaster or which include communications incident to or involved in an investigation by the Commission and concerning which the licensee or permittee has been notified, shall be retained by the licensee or permittee until he is specifically authorized in writing by the Commission to destroy them: *Provided, further*, That logs incident to or involved in any claim or complaint of which the licensee or permittee has notice shall be retained by the licensee or permittee until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for the filing of suits upon such claims.

§ 73.586 Availability of logs and records.

The following shall be made available upon request by an authorized representative of the Commission:

(a) Program, operating and maintenance logs.

(b) Equipment performance measurements required by § 73.554.

§ 73.587 Station identification.

See § 73.1201.

[34 F.R. 19762, Dec. 17, 1969]

§ 73.588 Mechanical reproductions.

(a) No mechanically reproduced program consisting of a speech, news event, news commentator, forum, panel discussion, or special event in which the element of time is of special significance, or any other program in which the element of time is of special significance and presentation of which would create, either intentionally or otherwise, the impression or belief on the part of the listening audience that the event or program being broadcast is in fact occurring simultaneously with the broadcast, shall be broadcast without an appropriate announcement being made either at the beginning or end of such reproduction or at the beginning or end of the program in which such reproduction is used that it is a mechanical reproduction or a mechanically reproduced program: *Provided, however,* That each such program of one minute or less need not be announced as such.

(b) The exact form of identifying announcement is not prescribed, but the language shall be clear and in terms commonly used and understood. Any other program mechanically reproduced or series of mechanical reproductions, including a mechanical reproduction used for background music, sound effects, station identification, program identification (theme music of short duration) or identification of sponsorship of the program proper, need not be announced as provided in paragraph (a) of this section, but the licensee shall not attempt affirmatively to create the impression that any program being broadcast by mechanical reproduction consists of live talent.

(c) The requirements of paragraph (a) of this section are waived with respect to network programs, transcribed and rebroadcast at a later hour because of the time zone differentials between the place where the program originates and where it is rebroadcast, this waiver being applicable whether the off-the-line recording is made by the network itself at one of its key stations or by an individual station, but only when the off-the-line recording is for broadcast at an hour not exceeding the time zone differential between the place where the program originates and where it is rebroadcast. Each station which broadcasts network programs at a later hour in accordance with this waiver shall make an appropriate announcement at least once each day between the hours of 10 a.m. and 10 p.m., stating that some or all of the network programs which are broadcast by that station are delayed broadcasts by means of transcription. This waiver provision also applies during the annual periods in which advanced time is effective with respect to network programs transcribed and rebroadcast one hour later because of the time differential resulting from the adoption or nonadoption of advanced time in some areas.

[28 F.R. 13651, Dec. 14, 1963, as amended at 33 F.R. 4412, Mar. 12, 1968]

§ 73.590 Broadcasts by candidates for public office.

(a) *Definitions.* A "legally qualified candidate" means any person who has publicly announced that he is a candidate for nomination by a convention of a political party or for nomination or election in a primary, special, or general election, municipal, county, state, or national, and who meets the qualifications prescribed by the applicable laws to hold the office for which he is a candidate, so that he may be voted for by the electorate directly or by means of delegates or electors, and who—

(1) Has qualified for a place on the ballot or

(2) Is eligible under the applicable law to be voted for by sticker, by writing in his name on the ballot, or other method and (i) has been duly nominated by a political party which is commonly known and regarded as such, or (ii) makes a substantial showing that he is a bona fide candidate for nomination or office, as the case may be.

(b) *General requirements.* No station licensee is required to permit the use of its facilities by any legally qualified candidate for public office, but if any licensee shall permit any such candidate to use its facilities, it shall afford equal opportunities to all other such candidates for that office to use such facilities: *Provided,* That such licensee shall have no power of censorship over the material broadcast by any such candidate.

(c) *Practices.* No licensee shall make any discrimination in practices, regulations, facilities, or services for or in connection with the service rendered pursuant to this part, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any licensee make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to broadcast to the exclusion of other legally qualified candidates for the same public office.

(d) *Records; inspection.* Every licensee shall keep and permit public inspection of a complete record of all requests for broadcast time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the licensee of such requests. Such records shall be retained for a period of two years.

NOTE: See § 1.526 of this chapter.

(e) *Time of request.* A request for equal opportunities must be submitted to the licensee within 1 week of the day on which the first prior use, giving rise to the right to equal opportunities, occurred: *Provided, however,* That where a person was not a candidate at the time of such first prior use, he shall submit his request within 1 week of the first subsequent use after he has become a legally qualified candidate for the office in question.

(f) *Burden of proof.* A candidate requesting such equal opportunities of the licensee, or complaining of non-compliance to the Commission shall have the burden of proving that he and his opponent are legally qualified candidates for the same public office.

(Sec. 315, 48 Stat. 1088, as amended; 47 U.S.C 315) [28 F.R. 13651, Dec. 14, 1963, as amended at 30 F.R. 4547, Apr. 8, 1965; 35 F.R. 7120, May 6, 1970]

§ 73.591 Rebroadcast.

(a) The term "rebroadcast" means reception by radio of the program of a radio station and the simultaneous or subsequent retransmission of such program by a broadcast station. The broadcasting of a program relayed by a remote pickup broadcast station or studio transmitter link is not considered a rebroadcast. In case a program is transmitted from its point of origin to a broadcast station entirely by common carrier facilities, whether by wire line or radio, the transmission of this program is not considered a rebroadcast.

NOTE: As used in this section, program includes any complete program or part thereof.

(b) Noncommercial educational FM stations may, without further authority from the Commission, rebroadcast programs originated by other U.S. FM, standard and international broadcast stations: *Provided,* That the Commission is notified in writing of the call letters of each station rebroadcast, together with certification that the originating station(s) has consented to the rebroadcast(s). However, the requirements of this paragraph do not apply to emergency rebroadcasting conducted pursuant to § 73.971(b), which provides unrestricted AM/FM/TV rebroadcast privileges for stations utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan.

NOTE 1: The notice and certification of consent shall be given within 3 days of any single rebroadcast, but in case of the regular practice of rebroadcasting certain programs several times during a license period, notice and certification of consent shall be given for the ensuing license period with the application for renewal of license, or at the beginning of such rebroadcast practice if begun during a license period.

NOTE 2: See § 73.503(c).

(c) No licensee of a noncommercial educational FM broadcast station shall rebroadcast the program of any United States radio station not designated in paragraph (b) of this section without written authority having first been obtained from the Commission upon application (informal) accompanied by written consent or certification of consent of the licensee of the station originating the program.

NOTE: By Order No. 82, dated and effective June 24, 1941, until further order of the Commission, § 73.591(c) is suspended only insofar as it requires prior written authority of the Commission for the rebroadcasting of programs originated for the express purpose by U. S. Government radio stations.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325) [28 F.R. 13651, Dec. 14, 1963, as amended at 33 F.R. 7492, May 21, 1968; 34 F.R. 18802, Nov. 25, 1969]

§ 73.592 Broadcast of telephone conversations.

See § 73.1206 which is applicable to all noncommercial educational FM stations.

[35 F.R. 7733, May 20, 1970]

§ 73.593 Subsidiary Communications Authorizations.

(a) A noncommerical educational FM broadcast licensee or permittee may apply for a Subsidiary Communications Authorization (SCA) to provide limited types of subsidiary service on a multiplex basis. Any use of SCA by such licensee or permittee must be consistent with the limitation on the purpose and operation of noncommercial educational FM stations contained in § 73.503: *Provided,* That uses permitted under this paragraph will not be considered "commercial" as long as no consideration for such use (other than the furnishing of the material transmitted and/or payment of line charges) is received by the licensee, directly or indirectly, and no commercial announcements or references are contained in the material transmitted under the SCA. Permissible uses must fall within one or both of the following categories:

(1) Transmission of programs which are noncommercial and in furtherance of an educational purpose, and which are of a broadcast nature but of interest primarily to limited segments of the station's audience. Illustrative services include: programs for presentation in classrooms, programs designed for specialized audiences such as doctors or other professional groups, and any use which would be permitted for a commercial FM station under § 73.293(a)(1), subject to the prohibitions against commercial operations and limitation as to purpose contained in this section and in § 73.503.

(2) Transmission of signals which are directly related to the operation of FM broadcast stations; for example, relaying of broadcast material to other broadcast stations, remote cueing and order circuits, remote control telemetering functions associated with authorized STL operation, and similar uses.

(b) Applications for Subsidiary Communications Authorization shall be submitted on FCC Form 318. An applicant for SCA shall specify the particular nature or purpose of the proposed use.

(c) SCA operations may be conducted without restriction as to time so long as the main channel is programmed simultaneously.

§ 73.594 Nature of the SCA.

(a) The SCA is of a subsidiary or secondary nature and shall not exist apart from the noncommercial educational FM license or permit. No transfer or assignment of it shall be made separate from the FM license or permit, and failure to transfer the SCA with the FM license or permit renders the SCA void. Any assignment or transfer of an SCA shall, if desired, be requested as part of the main station's transfer or assignment application. The licensee or permittee must seek renewal of the SCA (on FCC Form 318) at the same time it applies for its renewal of noncommercial educational FM license; failure to renew the latter automatically terminates the SCA.

(b) The grant or renewal of a noncommercial educational FM license or permit will not be furthered or promoted by the proposed or past operation under an SCA; the licensee must establish that its broadcast operation is in the public interest wholly apart from the SCA activities. (Violation of rules applicable to the SCA operation would, of course reflect on the licensee's qualifications to hold its broadcast license or permit.)

[28 F.R. 13651, Dec. 14, 1963, as amended at 34 F.R. 17108, Oct. 22, 1969]

§ 73.595 Operation under Subsidiary Communications Authorizations.

(a) Operations conducted under a Subsidiary Communications Authorization (SCA) shall conform to the uses and purposes authorized by the Commission in granting the SCA application. Prior permission to engage in any new or additional activity must be obtained from the Commission pursuant to application therefor.

(b) Superaudible and subaudible tones and pulses may, when authorized by the Commission, be employed by SCA holders to activate and deactivate subscribers' multiplex receivers. The use of these or any other control techniques to delete main channel material is specifically forbidden.

(c) In all arrangements entered into with outside parties affecting SCA operation, the licensee or permittee must retain control over all material transmitted over the station's facilities, with the right to reject any material which it deems inappropriate or undesirable. Subchannel leasing agreements shall be reduced to writing and filed with the Commission pursuant to § 1.613(d) of this chapter.

(d) The logging, announcement, and other requirements imposed by §§ 73.582, 73.583, 73.584, 73.587, and 73.588 are not applicable to material transmitted on authorized subcarrier frequencies.

(e) To the extent that SCA circuits are used for the transmission of program material, each licensee or permittee shall maintain a daily program log in which a general description of the material transmitted shall be entered once during each broadcast day: *Provided, however,* That in the event of a change in the general description of the material transmitted, an entry shall be made in the SCA program log indicating the time of each such change and a description thereof.

(f) Each licensee or permittee shall maintain a daily operating log of SCA operation in which the following entries shall be made (excluding subcarrier interruptions of five minutes or less):

(1) Time subcarrier generator is turned on.

(2) Time modulation is applied to subcarrier.

(3) Time modulation is removed from subcarrier.

(4) Time subcarrier generator is turned off.

(5) An entry describing the results obtained in determining the frequency of each SCA subcarrier.

(g) Program and operating logs for SCA operation may be kept on special columns provided on the station's regular program and operating log sheets.

(h) Technical standards governing SCA operation (§ 73.319) shall be observed by all noncommercial educational FM broadcast stations engaging in such operation.

(i) The subcarrier frequency of each SCA subcarrier shall be checked as often as necessary to insure that it is kept at all times within 500 cycles per second of the authorized frequency. At least one check shall be made each day. The choice of method of performing the daily frequency check is left to the discretion of the licensee. However, whatever method is used shall be capable of sufficient accuracy to reveal deviations of the operating frequency in excess of the 500 cycle per second tolerance.

[31 F.R. 3344, Mar. 3, 1966, as amended at 31 F.R. 7909, June 3, 1966]

§ 73.596 Stereophonic broadcasting.

(a) Noncommercial educational FM broadcast stations may, without further authority, transmit stereophonic programs in accordance with the technical standards set forth in § 73.322: *Provided, however*, That the Commission and the Engineer in Charge of the radio district in which the station is located shall be notified within 10 days, of the installation of type-accepted stereophonic transmission equipment or any change therein, and of the commencement of stereophonic programing.

(b) The pilot subcarrier frequency shall be checked as often as necessary to insure that it is kept at all times within the prescribed tolerance. At least one check shall be made each day. The choice of method for performing the daily frequency check is left to the discretion of the licensee. However, whatever method is used shall be capable of sufficient accuracy to reveal deviation of the pilot subcarrier frequency in excess of the prescribed 2 cycle per second tolerance.

[31 F.R. 7909, June 3, 1966]

§ 73.597 Operation during emergency.

(a) When necessary to the safety of life and property and in response to dangerous conditions of a general nature, noncommercial educational FM broadcast stations may, at the discretion of the licensee and without further Commission authority, transmit emergency weather warnings and other emergency information. Examples of emergency situations which may warrant either an immediate or delayed response by the licensee are: Tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, discharge of toxic gases, widespread power failures, industrial explosions, and civil disorders. Transmission of information concerning school closings and changes in school-bus schedules resulting from any of these conditions, is appropriate. In addition, and if requested by responsible public officials, emergency point-to-point messages may be transmitted for the purpose of requesting or dispatching aid and assisting in rescue operations.

(b) When emergency operation is conducted utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan as provided in § 73.971, the attention signal described in § 73.906 may be employed.

(c) Emergency operation shall be confined to the hours, frequencies, powers, and modes of operation specified in the license documents of the stations concerned.

(d) Any emergency operation undertaken in accordance with this section may be terminated by the Commission, if required in the public interest.

(e) Immediately upon cessation of an emergency during which broadcast facilities were used for the transmission of point-to-point messages under paragraph (a) of this section, a report in letter form shall be forwarded to the Commission and the Engineer in Charge of the radio district in which the station is located, setting forth the nature of the emergency, the dates and hours of emergency operation, and a brief description of the material carried during the emergency period.

(f) If an Emergency Action Condition is declared while emergency operation under this section is in progress, the Emergency Action Notification shall take precedence.

[33 F.R. 7492, May 21, 1968]

§ 73.598 Personal attacks; political editorials.

(a) When, during the presentation of views on a controversial issue of public importance, an attack is made upon the honesty, character, integrity or like personal qualities of an identified person or group, the licensee shall, within a reasonable time and in no event later than 1 week after the attack, transmit to the person or group attacked (1) notification of the date, time and identification of the broadcast; (2) a script or tape (or an accurate summary if a script or tape is not available) of the attack; and (3) an offer of a reasonable opportunity to respond over the licensee's facilities.

(b) The provisions of paragraph (a) of this section shall not be applicable (1) to attacks on foreign groups or foreign public figures; (2) to personal attacks which are made by legally qualified candidates, their authorized spokesmen, or those associated with them in the campaign, on other such candidates, their authorized spokesmen, or persons associated with the candidates in the campaign; and (3) to bona fide newscasts, bona fide news interviews, and on-the-spot coverage of a bona fide news event (including commentary or analysis contained in the foregoing programs, but the provisions of paragraph (a) of this section shall be applicable to editorials of the licensee).

NOTE: The fairness doctrine is applicable to situations coming within (b)(3), above, and, in a specific factual situation, may be applicable in the general area of political broadcasts (b)(2), above. See, section 315(a) of the Act, 47 U.S.C. 315(a); Public Notice: *Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance.* 29 F.R. 10415. The categories listed in (b)(3) are the same as those specified in section 315(a) of the Act.

(c) Where a licensee, in an editorial, (i) endorses or (ii) opposes a legally qualified candidate or candidates, the licensee shall, within 24 hours after the editorial, transmit to respectively (i) the other qualified candidate or candidates for the same office or (ii) the candidate opposed in the editorial (1) notification of the date and the time of the editorial; (2) a script or tape of the editorial; and (3) an offer of a reasonable opportunity for a candidate or a spokesman of the candidate to respond over the licensee's facilities: *Provided, however,* That where such editorials are broadcast within 72 hours prior to the day of the election, the licensee shall comply with the provisions of this paragraph sufficiently far in advance of the broadcast to enable the candidate or candidates to have a reasonable opportunity to prepare a response and to present it in a timely fashion.

[32 F.R. 10305, July 12, 1967, as amended at 33 F.R. 5364, Apr. 4, 1968]

§ 73.599 Equal employment opportunities.

(a) *General policy.* Equal opportunity in employment shall be afforded by all licensees or permittees of commercially or noncommercially operated standard, FM, television or international broadcast stations (as defined in this part) to all qualified persons, and no person shall be discriminated against in employment because of race, color, religion, national origin or sex.

(b) *Equal employment opportunity program.* Each station shall establish, maintain and carry out, a positive continuing program of specific practices designed to assure equal opportunity in every aspect of station employment policy and practice. Under the terms of its program, a station shall:

(1) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(2) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(3) Communicate the station's equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin or sex, and solicit their recruitment assistance on a continuing basis.

(4) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon race, color, religion, national origin or sex, from the station's personnel policies and practices and working conditions.

(5) Conduct continuing review of job structure and employment practices and

adopt positive recruitment, training, job design and other measures needed in order to insure genuine equality of opportunity to participate fully in all organizational units, occupations and levels of responsibility in the station.

(c) Applicants for construction permit for a new facility, for assignment of license or construction permit or for transfer of control (other than pro forma or involuntary assignments, and transfers), and applicants for renewal of license who have not previously done so, shall file with the Commission programs designed to provide equal employment opportunities for Negroes, orientals, American Indians, Spanish-surnamed Americans, and women, or amendments to such programs. Guidelines for the preparation of such programs are set out in section VI of the appropriate application forms. See 32 FCC 2d ——. A program need not be filed by any station having less than five full-time employees or with respect to any minority group which is represented in such insignificant numbers in the area that a program would not be meaningful. In the latter situation, a statement of explanation should be filed.

(Secs. 308–10, 48 Stat., as amended 1084–1086; 47 U.S.C. 308–310) [35 F.R. 8827, June 6, 1970, as amended at 36 F.R. 25013, Dec. 28, 1971]

Subpart D—[Reserved]

Subpart E—Television Broadcast Stations

Source: The provisions of Subpart E appear at 28 F.R. 13660, Dec. 14, 1963, unless otherwise noted.

General

§ 73.601 Scope of subpart.

This subpart contains the rules and regulations (including engineering standards) governing television broadcast stations, including noncommercial educational television broadcast stations, in the United States, its Territories and possessions. Television broadcast stations are assigned channels 6 megacycles per second (Mc/s) wide, designated as set forth in § 73.603(a).

[33 F.R. 15422, Oct. 17, 1968]

§ 73.602 Other pertinent rules.

Other pertinent provisions of the Commission's rules and regulations relating to the television broadcast service are included in the following parts of this chapter:

Part 1—Practice and Procedure.

Part 2—Frequency Allocations and Radio Treaty Matters; General Rules and Regulations.

Part 17—Construction, Marking, and Lighting of Antenna Structures.

Part 74—Experimental, Auxiliary, and Special Broadcast Services.

§ 73.603 Numerical designation of television channels.

(a)

Channel No.	Frequency band (megacycles)	Channel No.	Frequency band (megacycles)
2	54–60	43	644–650
3	60–66	44	650–656
4	66–72	45	656–662
5	76–82	46	662–668
6	82–88	47	668–674
7	174–180	48	674–680
8	180–186	49	680–686
9	186–192	50	686–692
10	192–198	51	692–698
11	198–204	52	698–704
12	204–210	53	704–710
13	210–216	54	710–716
14	470–476	55	716–722
15	476–482	56	722–728
16	482–488	57	728–734
17	488–494	58	734–740
18	494–500	59	740–746
19	500–506	60	746–752
20	506–512	61	752–758
21	512–518	62	758–764
22	518–524	63	764–770
23	524–530	64	770–776
24	530–536	65	776–782
25	536–542	66	782–788
26	542–548	67	768–794
27	548–554	68	794–800
28	554–560	69	800–806
29	560–566	70	806–812
30	566–572	71	812–818
31	572–578	72	818–824
32	578–584	73	824–830
33	584–590	74	830–836
34	590–596	75	836–842
35	596–602	76	842–848
36	602–608	77	848–854
37	308–614	78	854–860
38	614–620	79	860–866
39	620–626	80	866–872
40	626–632	81	872–878
41	632–638	82	878–884
42	638–644	83	884–890

(b) In Alaska and Hawaii, the frequency bands 76–82 Mc/s and 82–88 Mc/s are allocated for nonbroadcast use. These frequency bands (Channels 5 and 6) will not be assigned in Alaska or Hawaii for use by television broadcast stations.

(c) Channel 37, 608–614 Mc/s, is not available for assignment prior to January 1, 1974.

[28 F.R. 13660, Dec. 14, 1963, as amended at 35 F.R. 11179, July 11, 1970]

CHANNEL UTILIZATION

§ 73.606 Table of assignments.

(a) *General.* The following table of assignments contains the channels assigned to the listed communities in the United States, its Territories, and possessions. Channels designated with an asterisk are assigned for use by noncommercial educational broadcast stations only. A station on a channel identified by a plus or minus mark is required to operate with its carrier frequencies offset 10 kc/s above or below, respectively, the normal carrier frequencies.

(b) *Table of assignments.*

	Channel No.
Alabama:	
Andalusia	*2−
Anniston	40
Birmingham	6−, *10−, 13−, 21, 42, *62, 68
Coolidge	*43
Decatur	23
Demopolis	*41
Dothan	4, 18, *39, 60
Florence	15, 26, *36
Gadsden	44, 60
Huntsville	19, *25, 31, 48
Louisville	*43
Mobile	5+, 10+, 15, 21, *31, *42
Montgomery	12, 20, *26, 32, 45
Munford	*7−, *16
Selma	8−, 29
Tuscaloosa	17, 33, *39
Tuscumbia	47
Alaska:	
Anchorage	2−, *7−, 11, 13−
Bethel	*4
Fairbanks	2+, 4+, 7+, *9+, 11+, 13+
Juneau	*3, 8, 10
Ketchikan	2, 4, *9
Seward	4−, 9−
Sitka	13
Arizona:	
Ajo	*23
Douglas	3, *28
Flagstaff	2, 13, *16
Globe	*14
Holbrook	*18
Kingman	6−, *14
McNary	*22
Mesa	12−
Nogales	*16
Page	*17
Parker	*17
Phoenix	3+, 5−, *8+, 10−, 15, 21, 33, *39
Prescott	7, *19
Safford	*23
Tucson	4−, *6+, 9−, 13−, 18, *27, 40
Arizona—Continued	
Tuscon-Nogales	[2] 11
Yuma	11−, 13+, *16
Arkansas:	
Arkadelphia	*9+
Batesville	*17
El Dorado	10−, 18, *30
Fayetteville	*13−, 36
Fort Smith	5−, 24, 40
Harrison	*14
Hot Springs	*20, 26
Jonesboro	8−, *19
Little Rock	*2−, 4, 7−, 11+, 16, *29
Pine Bluff	25, 38
Russellville	*28
California:	
Alturas	13+
Anahein	56
Bakersfield	17, 23, 29, *39
Barstow	*35
Bishop	*14
Blythe	*22
Brawley	*26
Chico	12, *18, [1] 24, *30
Coalinga	*27
Concord	42
Corona	52
Cotati	*22
El Centro	7+, 9+
Eureka	3−, 6−, *13−
Fort Bragg	*17
Fresno	*18, 24, 30, 47, 53
Hanford	21
Indio	*19
Los Angeles	2, 4, 5, 7, 9, 11, 13, 22, *28, 34, *58, *68
Modesto	19−, *23
Oxnard	63+
Palm Springs	36, 42
Redding	7, *9+, 16
Ridgecrest	*25
Riverside	40, 46
Sacramento	3, *6, 10, [3]15, 31, 40
Salinas-Monterey	8+, 46, *56, 67
San Bernardino	18, *24, 30
San Diego	8, 10, *15, 39, 51
San Francisco	2+, 4−, 5+, 7−, *9+, 20, 26, *32, 38, 44, 60
San Jose	11+, 36, 48, *54
San Luis Obispo	6+, *15
San Mateo	*14
Santa Ana	*50
Santa Barbara	3−, 14, *20, *32
Santa Cruz	*16

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[1] Following the decision in Docket No. 18261, channels so indicated will not be available for television use until further action by the Commission.

[2] Operation on this channel is subject to the conditions, terms, and requirements set out in the Report and Order in Docket No. 19075, RM–1645, adopted January 5, 1972, released January 7, 1972, FCC 72–19.

[3] Channel 15 will not be available for television use until further action by the Commission.

	Channel No.
California—Continued	
Santa Maria	12+
Santa Rosa	50, *62
Stockton	13+, 58, 64
Susanville	*14
Tulare	26
Ventura	16
Visalia	43
Watsonville	*25
Yreka City	*20
Colorado:	
Alamosa	3—, *16
Boulder	*12, 14
Colorado Springs	11, 13, 21
Craig	*16
Denver	2, 4—, *6—, 7, 9—, 20, 31, *41
Durango	6+, *20
Fort Collins	22
Glenwood Springs	*19
Grand Junction	5—, *18
Gunnison	*17
La Junta	*22
Lamar	12—, *14
Leadville	*15
Montrose	10+, *22
Pueblo	5, *8, 26, 32
Salida	*23
Sterling	3, *18
Trinidad	*24
Connecticut:	
Bridgeport	43, *49
Hartford	3+, 18, *24, 61
New Britain	30
New Haven	8+, 59, *65
New London	26
Norwich	*53
Waterbury	20
Delaware:	
Dover	*34
Seaford	*38
Wilmington	*12, 61
District of Columbia:	
Washington	4—, 5—, 7+, 9, 14, 20, *26, *32, 50
Florida:	
Boca Raton	*14
Bradenton	*19
Clearwater	22
Cocoa	*18, 52
Daytona Beach	2—, 26
Fort Lauderdale	51
Fort Myers	11+, 20, *30
Fort Pierce	*21, 34
Gainesville	*5—, 20
Jacksonville	4+, *7, 12—, 17, 30, 47, *59
Key West	16, 22
Lake City	*41
Lakeland	32
Leesburg	*45, 55
Madison	*36
Marianna	*16
Melbourne	43, 56
Miami	*2, 4, 6, 7—, 10+, *17, 23, 33, 39, 45
Naples	26
New Smyrna Beach	*15
Ocala	*29, 51
Orlando	6—, 9, *24, 35
Florida—Continued	
Palatka	*42
Panama City	7+, 13, *22, 28
Pensacola	3—, *23, 33, 44
St. Petersburg	10—, 38, 44
Sarasota	40
Sebring	*27
Tallahassee	*11—, 27, 40
Tampa	*3, 8—, 13—, *16, 28
West Palm Beach	5, 12, 25, *42, 53
Georgia:	
Albany	10, 19, 31
Ashburn	*23
Athens	*8, 34
Atlanta	2, 5—, 11+, 17, *30, 36, 46, *57
Augusta	6+, 12+, 26, 54
Chatsworth	*18
Cochran	*15
Columbus	3, 9+, *28, 38, 54
Dawson	*25
Draketown	*27
Macon	13+, 24, 41, *47
Pelham	*14
Rome	14
Savannah	3+, *9—, 11, 22
Thomasville	6
Toccoa	32
Valdosta	*33, 44
Vidalia	*18
Warm Springs	*22
Waycross	*8+
Wrens	*20
Hawaii:	
Hilo (Hawaii)	2, *4, 9, 11, 13, 14+, 20+, 26+, *32+, *38+
Honolulu (Oahu)	2+, 4—, 9—, *11+, 13—, 14, 20, 26, 32, *38, *44
Lihue (Kauai)	3+, *8—, 10+, 12—, 15—, *21—, *27—
Wailuku (Maui)	3, 7, *10, 12, 15, 21, *27, *33
Idaho:	
Boise	2, *4+, 7, 14
Burley	*17
Caldwell	9—
Coeur d'Alene	*26
Grangeville	*15
Idaho Falls	3, 8+, 20, *33
Filer	*19
Lewiston	3—
Moscow	*12—
Nampa	6, 12+
Preston	*28
Pocatello	6—, *10, 15, 25, 31
Sandpoint	*16
Twin Falls	11, *13—
Weiser	*17
Illinois:	
Aurora	60
Bloomington	43
Carbondale	*8
Champaign	3+, 15—
Chicago	2—, 5, 7, 9+, *11, *20, 26, 32, 38, 44
Danville	68
Decatur	17, 23

	Channel No.
Illinois—Continued	
DeKalb	*48
Edwardsville	*18
Elgin	[2] 66
Freeport	23, *65
Galesburg	63
Harrisburg	3
Jacksonville	14
Joliet	[1] 14, 66
Kankakee	*54
LaSalle	35
Macomb	*22
Moline	8, *24
Mount Vernon	13
Olney	*16
Peoria	19, 25, 31, 47, *59
Quincy	10−, 16, *27
Rockford	13, 17, 39
Rock Island	4+
Springfield	20, 49, 55, *65
Streator	*64
Urbana	*12−, 27
Vandalia	*21
Indiana:	
Anderson	67
Bloomington	4, *30, 63
Elkhart	28
Evansville	7, *9+, 14, 25, 44
Fort Wayne	15, 21, 33, *39, 55
Gary	*50, 56
Hammond	62
Indianapolis	6, 8−, 13−, *20, 40, 59, *69
Kokomo	29
Lafayette	18, *24
Madison	*60
Marion	23
Muncie	49, *61
Richmond	43
South Bend	16, 22, *34, 46
Terre Haute	2+, 10, *26, 66
Vincennes	*22
Iowa:	
Ames	5, 23, *34
Burlington	26, *58
Carroll	*18
Cedar Rapids	2, 9−, 28
Council Bluffs	*32
Davenport	6+, 18, 30, *36
Decorah	*14
Des Moines	8−, *11+, 13−, 17, *43, 63, 69
Dubuque	16, *29, 40
Estherville	*49
Fort Dodge	21, *46
Iowa City	*12+, 20
Mason City	3+, *24
Ottumwa	15, *33
Red Oak	*36
Sioux City	4−, 9, 14, *27
Waterloo	7+, 22, *32
Kansas:	
Chanute	*30
Colby	4
Columbus	*34
Dodge City	6+, *21
Emporia	*25
Garden City	11+, 13−
Goodland	10
Great Bend	2
Hays	7−, *14
Hutchinson	*8, 12, 36
Lakin	*3
Lincoln Center	*9
Manhattan	*21
Oakley	*15
Parsons	*39
Phillipsburg	*22
Pittsburg	7+
Pratt	*32
Salina	18, 34, 44
Sedan	*28
Topeka	*11, 13+, 27, 43, 49
Wichita	3−, 10−, *15, 24, 33, *42
Kentucky:	
Ashland	*25, 61
Bowling Green	13, 40, *53
Covington	*54
Elizabethtown	*23
Hazard	*35, 57
Hopkinsville	51
Lexington	18, 27, *46, 62
Louisville	3−, 11+, *15, 21, 32, 41, *68
Madisonville	*35
Morehead	*38
Murray	*21
Owensboro	19, 31
Owenton	*52
Paducah	6+, 29
Pikeville	*22, 51
Somerset	16, *29
Louisiana:	
Alexandria	5, 25, 31, *41
Baton Rouge	2, 9−, *27, 33
De Ridder	*23
Houma	11
Lafayette	3, 10, 15, *24
Lake Charles	7−, *18, 29
Monroe	8+, *13, 14, 39
Morgan City	*14
Natchitoches	*28
New Iberia	36
New Orleans	4+, 6+, 8, *12, 20, 26, *32, 38
Shreveport	3−, 12, *24, 33
Tallulah	*19
Maine:	
Augusta	*10−
Bangor	2−, 5+, 7−
Calais	*13−
Fort Kent	*46
Fryeburg	*18
Houlton	*25
Kittery	*34
Lewiston	8−, 35
Millinocket	*44
Orono	*12−
Portland	6−, 13+, 26, 51
Presque Isle	8, *10+
Rumford	*43

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[1] Following the decision in Docket No. 18261, channels so indicated will not be available for television use until further action by the Commission.

[2] This channel is not available for use at Elgin unless and until it is determined by the Commission that it is not needed for use at Joliet, Ill.

	Channel No.
Maryland:	
Annapolis	*22
Baltimore	2+, 11−, 13+, 24, 45, 54, *67
Cumberland	*36, 52, 65
Frederick	*62
Hagerstown	25, *31
Salisbury	16, *28
Waldorf	*56
Massachusetts:	
Boston	*2+, 4−. 5−, 7+, 25, 38, *44, 56, 68
Greenfield	32
New Bedford	6+, 28, *47
North Adams	19, *35
Pittsfield	51
Springfield	22, 40, *57
Worcester	[1] 14, 27, *48, 66
Michigan:	
Alpena	*6, 11
Ann Arbor	*58
Bad Axe	[1] *15
Battle Creek	41
Bay City	5−, *19, 61
Cadillac	9, *27
Calumet	5−, *22
Cheboygan	4+
Detroit	2+, 4, 7−, 20, 50, *56, 62
East Lansing	23, *69
Escanaba	3+
Flint	12−, *31, 66
Grand Rapids	8+, 13+, 17, *35
Iron Mountain	8−, *14
Ironwood	*15, 24
Jackson	18
Kalamazoo	3−, *52
Lansing	6−, 36, 53
Manistee	*21
Manistique	*15
Marquette	6−, *13, 19
Mount Clemens	22
Mount Pleasant	*14
Muskegon	54
Parma	10−
Petoskey	*28
Port Huron	44
Saginaw	25, 42
Sault Ste. Marie	8, 10+, *32
Traverse City	7+, 29
West Branch	*24
Minnesota:	
Alexandria	7, *24
Appleton	*10−
Austin	6−, *15
Bemidji	*9, 26
Brainerd	*22
Crookston	*33
Duluth	3, *8, 10+, 21, 27
Ely	*17
Fairmont	*16
Hibbing	13−, *18
International Falls	11, *35
Mankato	12, *26
Marshall	*30
Minnesota—Continued	
Minneapolis-St. Paul	*2−, 4, 5−, 9+, 11−, *17, 23, 29
Rochester	10, 47
St. Cloud	19, *25, 41
St. James	38
Thief River Falls	10
Wadena	*20
Walker	12−
Willmar	*14
Winona	*35, 44
Worthington	*20
Mississippi:	
Biloxi	13+, *19, 25
Booneville	*20
Bude	*17
Clarksdale	*22
Cleveland	*31
Columbia	*45
Columbus	4−, 27, *43
Greenville	15, 21
Greenwood	6, *23
Hattiesburg	22, *47
Jackson	3+, 12+, 16, *29, 40
Laurel	7, 18
Meridian	11−, *14, 24, 30
Natchez	*42
Oxford	*18
Senatobia	*34
State College	*2+
Tupelo	9−
Vicksburg	35
Yazoo City	*32
Missouri:	
Birchtree	*20
Bowling Green	*35
Cape Girardeau	12, 23, *39
Carrollton	*18
Columbia	8+, 17
Flat River	*22
Hannibal	7−
Jefferson City	13, 25, *36
Joplin	12+, 16, *22
Kansas City	4, 5+, 9+, *19, 41, 50, 62, *68
King City	*28
Kirksville	3−
LaPlata	*21
Lowry City	*15
Poplar Bluff	15, *26
Rolla	*28
St. Joseph	2−, 16, 22
St. Louis	2, 4−, 5−, *9, 11−, 24, 30, *40
Sedalia	6−
Springfield	3+, 10, *21, 27
Montana:	
Anaconda	2+
Billings	2, 8, *11, 14, 20
Bozeman	*9
Butte	4, 6+, *7−, 18, 24
Cut Bank	*14
Dillon	*14
Glendive	5+, 9+, *16
Great Falls	3+, 5+, 16, 26, *32
Hardin	4+
Havre	9+, 11+, *18
Helena	10+, 12, *15
Kalispell	9−, *29

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[1] Following the decision in Docket No. 18261, channels so indicated will not be available for television use until further action by the Commission.

	Channel No.
Montana—Continued	
Lewistown	13
Miles City	3−, *6, 10
Missoula	8−, *11−, 13−, 17, 23
Wolf Point	*17
Nebraska:	
Albion	8+, *21
Alliance	*13−
Bassett	*7−
Grand Island	11−, 17
Hastings	5−, *29
Hayes Center	6
Hay Springs	4+
Kearney	13
Lexington	*3+
Lincoln	10+, *12−, 45, 51
McCook	8−
Merriman	*12
Norfolk	*19
North Platte	2−, *9+
Omaha	3, 6+, 7, 15, *26, 42, *48
Scottsbluff	10−
Superior	4+
Nevada:	
Boulder City	5+
Elko	10−, *14
Ely	3−, 6+
Fallon	*25
Goldfield	2−
Las Vegas	3, 8−, *10+, 13−, 21
McGill	*13
Reno	2, 4, *5, 8, 21, 27
Tonopah	9−, *17
Winnemucca	7+, *15
Yerington	*16
New Hampshire:	
Berlin	*40
Concord	21
Durham	*11
Hanover	*15, 31
Keene	*52
Littleton	*49
Manchester	9−, 50, 60
Portsmouth	[1] 17
New Jersey:	
Asbury Park	[2] 58
Atlantic City	[1] *18, *36, 53
Burlington	48
Camden	*23
Little Falls	*50
Newark	13−, 68
New Brunswick	[1] *19, 47, *58
Paterson	41
Trenton	*52
Vineland	65
Wildwood	40
New Mexico:	
Alamogordo	*18
Albuquerque	4+, *5+, 7+, 13+, 14, 23, *32
Carlsbad	6−, *15, 25
Clayton	*17
Clovis	12+
Deming	*16
Farmington	12+, *15
Gallup	3, *8−, 10
Hatch	*12
Hobbs	29
Las Cruces	*22, 48
Lovington	*19
Portales	*3+
Raton	*18
Roswell	8, 10−, 21, 27, *33
Santa Fe	2+, *9+, 11−, 19
Silver City	6, *10+
Socorro	*15
Tucumcari	*15
New York:	
Albany-Schnectady	6, 10−, 13, *17, 23, *29, 45
Amsterdam	*39, 55
Binghamton	12−, 34, 40, *46
Buffalo	2, 4−, 7+, 17, *23, 29, 49
Carthage	7−
Corning	*30
Elmira	18, 36
Glens Falls	*58
Ithaca	*14, 52
Jamestown	26, *46
Kingston	63
Lake Placid	5, *34
Levittown	*21
Massena	*18
New York	2, 4, 5+, 7, 9+, 11+, *25, 31
Oneonta	[1] 15, *42
Patchogue	67
Plattsburg	*57
Poughkeepsie	54
Riverhead	55
Rochester	8, 10+, 13−, *21, 31, *61
Syracuse	3−, 5−, 9−, *24, 43, 62
Utica	2−, 20, 33, *59
Watertown	*16, 50
North Carolina:	
Asheville	13−, 21, *33, 62
Burlington	16
Chapel Hill	*4+
Charlotte	3, 9+, 18, 36, *42
Columbia	*2
Concord	*58
Durham	11+, 28
Fayetteville	40, 62
Franklin	*56
Goldsboro	17
Greensboro	2−, 48, 61
Greenville	9−, 14, *25
Hickory	14
High Point	8−, *32
Jacksonville	19
Kannapolis	64

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[1] Following the decision in Docket No. 18261, channels so indicated will not be available for television use until further action by the Commission.

[2] This channel is not available for use at Asbury Park unless and until it is determined by the Commission that it is not needed for educational use at New Brunswick, N.J.

	Channel No.
North Carolina—Continued	
Lexington	20
Linville	*17
Morganton	23
New Bern	12+
Raleigh	5, 22, *34
Rocky Mount	47
Waynesville	59
Washington	7
Wilmington	3−, 6, 29, *39
Wilson	30
Winston-Salem	12, *26, 45
North Dakota:	
Bismarck	*3, 5, 12−, 17, 26
Devils Lake	8+, *22
Dickinson	2+, *4−, 7
Ellendale	*19
Fargo	6, 11+, *13, 15
Grand Forks	*2, 14, 27
Jamestown	7−, *23
Minot	*6+, 10−, 13−, 14, 24
Pembina	12
Valley City	4−
Williston	8−, 11−, *15
Ohio:	
Akron	23, *49, 55
Alliance	*45
Ashtabula	[1]15
Athens	*20
Bowling Green	*27, *70
Cambridge	*44
Canton	17, 67
Chillicothe	53
Cincinnati	5−, 9, 12, 19, *48, 64
Cleveland	3, 5+, 8, 19, *25, 61
Columbus	4−, 6+, 10+, 28, *34, *56
Dayton	2, 7+, 16, 22, *45
Defiance	65
Hillsboro	*24
Lima	35, 44, *57
Lorain	43
Mansfield	*47
Marion	68
Newark	*31, 52
Oxford	*14
Portsmouth	30, 36, *42
Sandusky	51
Springfield	26, *66
Steubenville	9+, *62
Toledo	11−, 13, 24, *30, 54, 60
Youngstown	21, 27, 33, *58
Zanesville	18
Oklahoma:	
Ada	10+, *22
Altus	*19
Ardmore	12−, *17
Bartlesville	17
Elk City	8+, *15
Enid	20, *26
Guymon	*16
Hugo	*15
Hugo-Paris (Texas)	42
Lawton	7+, 16, *36
McAlester	*32
Miami	*18
Muskogee	19
Oklahoma City	4−, 5, 9−, *13, 14, 25, 34, 43
Oklahoma—Continued	
Tulsa	2+, 6, 8−, *11−, 23, 29, *35, 41
Woodward	*17
Oregon:	
Astoria	*21
Bend	*15, 21
Brookings	*14
Burns	*18
Corvallis	*7−
Eugene	9+, 13, 16, *28
Klamath Falls	2−, *22
La Grande	13+, *16
Medford	5, 8+, 10+, *18
North Bend	11, *17
Portland	2, 6+, 8−, *10, 12, 24, *30
Roseburg	4+
Salem	3+, *22, 32
The Dalles	*17
Pennsylvania:	
Allentown	*39, 69
Altoona	10−, 38, 47, *57
Bethlehem	60
Clearfield	*3+
Erie	12, 24, 35, *54, 66
Greensburg	40
Harrisburg	21, 27, *33
Hazleton	56
Johnstown	6, 19, *28
Lancaster	8−, 15
Lebanon	59
Philadelphia	3. 6−, 10, 17, 29, *35, 57
Pittsburgh	2−, 4+, 11, *13−, *16, 22, 53
Reading	51
State College	29, *55
Scranton	16, 22, 38, *44, 64
State College	*55
Wilkes-Barre	28
Williamsport	[4]20
York	43, 49
Rhode Island:	
Providence	10+, 12+, [1]16, *36, 64
South Carolina:	
Aiken	*44
Allendale	*14
Anderson	40
Beaufort	*16
Charleston	2+, 4, 5+, *7−
Columbia	10−, 19, 25, *35, 57
Conway	*23
Florence	13+, 15, 21, *33
Georgetown	*41
Greenville	4−, 16, *29
Greenwood	*38
Rock Hill	30, *55
Spartanburg	7+, 49
Sumter	*27

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[1] Following the decision in Docket No. 18261, channels so indicated will not be available for television use until further action by the Commission.

[4] Following the decision in Docket 18261, channels so indicated will not be available for television use until further action by the Commission.

	Channel No.
South Dakota:	
Aberdeen	9−, *16
Brookings	*8
Eagle Butte	*13
Huron	12+
Lead	5−, 11+
Lowry	*11
Martin	*8
Mitchell	5+
Pierre	4, *10+
Rapid City	3+, 7+, *9, 15, 21
Reliance	6−
Seneca	*2−
Sioux Falls	11, 13+, 17, *23, 36
Vermillion	*2+
Watertown	3−
Tennessee:	
Athens	*24
Chattanooga	3+, 9, 12−, *45, 61
Cookeville	*22
Crossville	*20, 53
Fayetteville	*28
Greeneville	39
Jackson	7+, 16, *32
Johnson City	11−, *41
Kingsport	19
Knoxville	6, 10+, *15, 26−, 43
Lexington	*11
Memphis	3−, 5+, *10+, 13+, *14, 24, 30
Murfreesboro	39
Nashville	*2−, 4+, 5, 8+, 17, 30, *42
Sneedville	*2+
Texas:	
Abiline	9+, 15, *26, 32
Alpine	12−
Amarillo	*2−, 4, 7, 10, 14
Austin	7+, *18, 24, 36, 42
Bay City	*43
Beaumont	6−, 12−, 21, *34
Big Spring	4−, *14
Boquillas	8−
Brady	13
Brownsville	23
Bryan	3+, *15
Childress	*21
Corpus Christi	3−, 6+, 10−, 28, *38
Dallas	4+, 8, *13+, 27, 33, 39
Del Rio	10, *24
Denton	*2
El Paso	4, *7, 9, 13, 14, 26, *38
Fort Stockton	5+
Fort Worth	5+, 11−, 21, *31
Galveston	16, *22
Harlingen	4+, *44, 60
Houston	2−, *8, 11+, 13−, *14, 20, 26, 39
Laredo	8, 13, 27, *39
Longview	16
Lubbock	*5−, 11, 13−, 28, 34
Lufkin	9
McAllen	48
Marfa	3
Marshall	*22, 35
Midland	2+, 18
Monahans	9−
Nacogdoches	19, *32
Odessa	7−, 24, 30, *36

	Channel No.
Texas—Continued	
Paris-Hugo (Oklahoma)	42
Port Arthur	4−
Presidio	7+
Richardson	23
Rosenberg	45
San Angelo	3−, 6+, 8+, *21
San Antonio	4, 5, *9−, 12+, *23, 29, 41
Sherman	20, *26
Sonora	11+
Sweetwater	12
Temple	6, 46
Texarkana	6+, 17, *34
Tyler	7, 14, *38
Victoria	19, 25
Waco	10+, 25, *34, 44
Weslaco	5−
Wichita Falls	3, 6−, 18, *24
Utah:	
Cedar City	4, *16
Logan	12−, *22
Moab	*14
Monticello	*16
Ogden	*9+, *18, 24, 30
Price	6, *15
Provo	*11+, 16
Richfield	8+, *19
Salt Lake City	2−, 4−, 5+, *7−, 14, 20, *26
St. George	*18
Vernal	3+, *17
Vermont:	
Burlington	3, 22, *33
Rutland	*28
St. Johnsbury	*20
Windsor	*41
Virginia:	
Blacksburg	*43
Bluefield	*63
Bristol	5+, *28
Charlottesville	29, *41, 64
Courtland	*52
Danville	24, 44, *56
Fredericksburg	*53, 69
Front Royal	*42
Hampton	13−, *15
Harrisonburg	3−
Kenbridge	*31
Lynchburg	13, 21, *54
Norfolk-Portsmouth-Newport News	3+, 10+, 27, 33, 49, *55
Norton	*47
Onancock	*25
Petersburg	8
Richmond	6+, 12−, *23, 35, *57, 63
Roanoke	7−, 10, *15, 27
Staunton	*51
West Point	*46
Washington:	
Bellingham	12+, 24, *34, 64
Centralia	*15
Everett	16
Kennewick	42
Pasco	19
Pullman	*10−
Richland	25, *31
Seattle	4, 5+, 7, *9, 22, *28
Spokane	2−, 4−, 6−, *7+, 22, 28

	Channel No.
Washington—Continued	
Tacoma	11+, 13—, 20, *56, *62
Vancouver	*14
Walla Walla	14
Wenatchee	*18, 27
Yakima	23, 29, 35, *47
West Virginia:	
Beckley	4
Bluefield	6—, 40
Charleston	8+, 23, 29, *49
Clarksburg	12+, 46
Fairmont	66
Grandview	*9—
Huntington	3+, 13+, *33
Keyser	*48
Martinsburg	*44
Morgantown	*24
Parkersburg	15, 39, *57
Weirton	*50
Weston	5
Wheeling	7,[1] 14, 41
Williamson	*31
Wisconsin:	
Appleton	32
Colfax	*28
Eau Claire	13+, 18
Fond du Lac	34
Green Bay	2+, 5+, 11+, 26, *38
Janesville	57
Kenosha	55
LaCrosse	8+, 19, 25, *31
Madison	3, 15, *21, 27, 47
Manitowoc	16
Milwaukee	4—, 6, *10+, 12, 18, 24, 30, *36
Oshkosh	22
Racine	49
Rhinelander	12+
Sheboygan	28
Superior	6+, 40
Wausau	7—, 9, *20, 33
Wyoming:	
Casper	2+, *6+, 14, 20
Cheyenne	5+, *17, 27, 33
Lander	4
Laramie	*8+
Rawlins	11—
Riverton	10+
Rock Springs	13
Sheridan	7, 12+
U.S. Territories and Possessions	
Guam:	
Agana	*4, 8, 10, *12
Puerto Rico:	
Aguadilla	*32, 44
Arecibo-Aguadilla	12+
Arecibo	54, 80
Bayamon	36
Caguas	11—, *58
Carolina	52
Cayey	76
Fajardo	13+, *40
Guayama	46
Humacoa	68
Mayaguez	*3+, 5—, 16, 22
Ponce	7+, 9—, 14, 20, *26, 48
San Juan	2+, 4—, *6+, 18, 24, 30, *74
San Sebastian	38
Utuado	*70
Vega Baja	64
Yauco	42
Virgin Islands:	
Charlotte Amalie	10—, 17, *23, 43
Christiansted	8+, 15, *21, 27
Charlotte Amalie-Christiansted	*3,[2] *12

NOTE: Offset designators for UHF channels are not shown in the table above but will be added in a subsequent order. The appropriate offset will be shown on any construction permit or license which may be issued prior thereto.

EDITORIAL NOTE: § 73.606 was published in its entirety at 28 F.R. 13660, Dec. 14, 1963. FEDERAL REGISTER citations to subsequent amendments will be found in the List of CFR Sections Affected.

EFFECTIVE DATE NOTE: The amendments appearing at 37 F.R. 19616, Sept. 21, 1972 and 37 F.R. 20554, Sept. 30, 1972 are effective Oct. 31 and Nov. 8, 1972 respectively.

§ 73.607 Availability of channels.

(a) Subject to the provisions of paragraph (b) of this section, applications may be filed to construct television broadcast stations only on the channels assigned in the Table of Assignments (§ 73.606(b)) and only in communities listed therein. Applications which fail to comply with this requirement, whether or not accompanied by a petition to amend the Table, will not be accepted for filing: *Provided, however*, That applications specifying channels which accord with publicly announced Commission Orders changing the Table of Assignments will be accepted for filing even though such applications are tendered before the effective dates of such channel changes.

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[1] Following the decision in Docket No. 18261, channels so indicated will not be available for television use until further action by the Commission.

[2] Stations using these assignments shall limit radiation toward stations on the same channel in Puerto Rico, to no more than the effective radiated power which would be radiated by an omnidirectional station using maximum permissible effective radiated power for antenna height above average terrain, at the minimum distances from such stations specified in § 73.310(b). The Commission shall consider the status of the negotiations with the appropriate British authorities concerning these assignments when the applications for construction permits come before the Commission.

(b) A channel assigned to a community listed in the Table of Assignments is available upon application in any unlisted community which is located within 15 miles of the listed community. In addition, a channel assigned to a community listed in the Table of Assignments and not designated for use by noncommercial educational stations only, is available upon application in any other community within 15 miles thereof which, although listed in the Table, is assigned only a channel designated for use only by noncommercial educational stations. Where channels are assigned to two or more communities listed in combination in the Table of Assignments the provisions of this paragraph shall apply separately to each community so listed. The distance between communities shall be determined by the distance between the respective coordinates thereof as set forth in the publication of the United States Department of Commerce entitled "Air Line Distance Between Cities in the United States." (This publication may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.) If said publication does not contain the coordinates of either or both communities, the coordinates of the main post office in either or both of such communities shall be used. The method to be followed in making the measurements is set forth in § 73.611(d).

§ 73.608 International agreements.

Authorizations issued by the Commission for television broadcast facilities will be subject to the provisions of any agreements entered into by the United States with Canada and Mexico concerning television assignments and authorizations. Where, pursuant to such an agreement, timely objection is received from the foreign country involved to an authorization granted by the Commission, the Commission may, on its own motion, set aside such authorization pending consideration of such objection. Upon receipt of such objection, the Commission will notify the person to whom such authorization has been issued.

§ 73.609 Zones.

(a) For the purpose of allocation and assignment, the United States is divided into three zones as follows:

(1) Zone I consists of that portion of the United States located within the confines of the following lines drawn on the U.S. Albers Equal Area Projection Map (based on standard parallels 29½° and 45½°; north American datum): Beginning at the most easterly point on the State boundary line between North Carolina and Virginia; thence in a straight line to a point on the Virginia-West Virginia boundary line located at north latitude 37°49′ and west longitude 80°12′30″; thence westerly along the southern boundary lines of the States of West Virginia, Ohio, Indiana, and Illinois to a point at the junction of the Illinois, Kentucky, and Missouri State boundary lines; thence northerly along the western boundary line of the State of Illinois to a point at the junction of the Illinois, Iowa, and Wisconsin State boundary lines; thence easterly along the northern State boundary line of Illinois to the 90th meridian; thence north along this meridian to the 43.5° parallel; thence east along this parallel to the United States-Canada border; thence southerly and following that border until it again intersects the 43.5° parallel; thence east along this parallel to the 71st meridian; thence in a straight line to the intersection of the 69th meridian and the 45th parallel; thence east along the 45th parallel to the Atlantic Ocean. When any of the above lines pass through a city, the city shall be considered to be located in Zone I. (See Figure 1 of § 73.699.)

(2) Zone II consists of that portion of the United States which is not located in either Zone I or Zone III, and Puerto Rico, Alaska, Hawaiian Islands and the Virgin Islands.

(3) Zone III consists of that portion of the United States located south of a line, drawn on the United States Albers Equal Area Projection Map (based on standard parallels 29½° and 45½°; North American datum), beginning at a point on the east coast of Georgia and the 31st parallel and ending at the United States-Mexican border, consisting of arcs drawn with a 150 mile radius to the north from the following specified points:

	North latitude	*West longitude*
(*a*)	29°40′00″	83°24′00″
(*b*)	30°07′00″	84°12′00″
(*c*)	30°31′00″	86°30′00″
(*d*)	30°48′00″	87°58′30″
(*e*)	30°00′00″	90°38′30″
(*f*)	30°04′30″	93°19′00″
(*g*)	29°46′00″	95°05′00″
(*h*)	28°43′00″	96°39′30″
(*i*)	27°52′30″	97°32′00″

When any of the above arcs pass through a city, the city shall be considered to be located in Zone II. (See Figure 2 of § 73.699.)

[28 F.R. 13660, Dec. 14, 1963, as amended at 33 F.R. 15422, Oct. 17, 1968]

§ 73.610 Separations.

(a) The provisions of this section relate to assignment separations and station separations. Petitions to amend the Table of Assignments (§ 73.606(b)) (other than those also expressly requesting amendment of this section or § 73.609) will be dismissed and all applications for new television broadcast stations or for changes in the transmitter sites of existing stations will not be accepted for filing if they fail to comply with the requirements specified in paragraphs (b), (c) and (d) of this section.

NOTE: Licensees and permittees of television broadcast stations which were operating on April 14, 1952 pursuant to one or more separations below those set forth in § 73.610 may continue to so operate, but in no event may they further reduce the separations below the minimum. As the existing separations of such stations are increased, the new separations will become the required minimum separations until separations are reached which comply with the requirements of § 73.610. Thereafter, the provisions of said section shall be applicable.

(b) Minimum co-channel assignment and station separations:

(1)

Zone	Channels 2–13	Channels 14–83
	Miles	*Miles*
I	170	155
II	190	175
III	220	205

(2) The minimum co-channel mileage separation between a station in one zone and a station in another zone shall be that of the zone requiring the lower separation.

(c) Minimum assignment and station adjacent channel separations applicable to all zones:

(1)

Channels 2–13	Channels 14–83
60 miles	55 miles

(2) Due to the frequency spacing which exists between Channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, the minimum adjacent channel separations specified above shall not be applicable to these pairs of channels (see § 73.603).

(d) In addition to the requirements of paragraphs (a), (b) and (c) of this section, the minimum assignment and station separations between stations on Channels 14–83, inclusive, as set forth in Table IV of § 73.698 must be met in either rule-making proceedings looking towards the amendment of the Table of Assignments (§ 73.606(b)) or in licensing proceedings. No channel listed in column (1) of Table IV of § 73.698 will be assigned to any city, and no application for an authorization to operate on such a channel will be granted, unless the mileage separations indicated at the top of columns (2)–(7), inclusive, are met with respect to each of the channels listed in those columns and parallel with the channel in column (1).

(e) The zone in which the transmitter of a television station is located or proposed to be located determines the applicable rules with respect to co-channel mileage separations where the transmitter is located in a different zone from that in which the channel to be employed is located.

§ 73.611 Reference points and distance computations.

(a) In considering petitions to amend the Table of Assignments (§ 73.606(b)), the following reference points shall be used by the Commission in determining assignment separations between communities:

(1) Where transmitter sites for the pertinent channels have been authorized in communities involved in a petition to amend the Table of Assignments, separations between such communities shall be determined by the distance between the coordinates of the authorized transmitter sites in the respective communities as set forth in the Commission's authorizations therefor.

(2) Where an authorized transmitter site is available for use as a reference point in one community but not in the other for the pertinent channels, separations shall be determined by the distance between the coordinates of the transmitter site as set forth in the Commission's authorization therefor and the coordinates of the other community as set forth in the publication of the United States Department of Commerce, entitled "Air Line Distances Between Cities in the United States." If said publication does not contain the coordinates for said

other community, the coordinates of the main post office thereof shall be used.

(3) Where no authorized transmitter sites are available for use as reference points in both communities for the pertinent channels, the distance between the two communities listed in the above publication shall be used. If said publication does not contain such distance, the separation between the two communities shall be determined by the distance between the coordinates thereof as set forth in said publication. Where such coordinates are not contained in said publication, the coordinates of the main post offices of said communities shall be used.

(4) Where the distance between the reference point in a community to which a channel is proposed to be assigned and the reference point in another community or communities does not meet the minimum separation requirements of § 73.610, the channel may be assigned to such community upon a showing that a transmitter site is available that would meet the minimum separation requirements of § 73.610 and the minimum field intensity requirements of § 73.685. In such cases, where a station is not authorized in the community or communities to which measurements from the proposed channel assignment must be made pursuant to § 73.610, a showing should also be made that the distance between suitable transmitter sites in such other community or communities and the proposed transmitter site for the new channel meet the Commission's minimum spacing and coverage requirements.

(b) Station separations in licensing proceedings shall be determined by the distance between the coordinates of the proposed transmitter site in one community and

(1) The coordinates of an authorized transmitter site for the pertinent channel in the other community; or, where such transmitter site is not available for use as a reference point,

(2) The coordinates of the other community as set forth in the above-described publication of the United States Department of Commerce; or, if not contained therein,

(3) The coordinates of the main post office of such other community.

(4) In addition, where there are pending applications in other communities which, if granted, would have to be considered in determining station separations, the coordinates of the transmitter sites proposed in such applications must be used to determine whether the requirements with respect to minimum separations between the proposed stations in the respective cities have been met.

(c) In measuring assignment and station separations involving cities listed in the Table in combination, where there is no authorized transmitter site in any of the combination cities on the channel involved, separation measurements shall be made from the reference point which will result in the lowest separation.

(d) The distance between reference points is considered to be the length of the hypotenuse of a right triangle, one side of which is the difference in latitude of the reference points and the other side the difference in longitude of the two reference points, and shall be computed as follows. This method is appropriate for determining distances up to 220 miles, and for such distances will normally be more accurate than using spherical trigonometry without correction for the spheroidal shape of the earth. However, its accuracy deteriorates rapidly at distances beyond 300 miles and this method should not be used to compute greater distances.

(1) Determine the difference in latitude and the difference in longitude between the two reference points. Convert these two differences into degrees and decimal parts of a degree in accordance with Table I of § 73.698.

(2) Determine the middle latitude of the two reference points to the nearest second of latitude (average the latitudes of the two points).

(3) Multiply the difference in latitude by the number of miles per degree of latitude difference obtained from Table II of § 73.698 for the appropriate middle latitude (interpolate linearly). This determines the North-South distance in statute miles.

NOTE: In determining necessary distance computations for Alaska, Hawaii, and the Territories, the appropriate mileage per degree may be obtained by linear interpolation of the data given on pages 1246 and 1247 of the tables in publication H.O. No. 9 (Bowditch-American Practical Navigator—1958 Edition) of the U.S. Navy Department, Hydrographic Office. This publication may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.

(4) Multiply the difference in longitude by the number of miles per degree of longitude difference obtained from Table III of § 73.698, for the appropriate middle latitude (interpolate linearly). This determines the East-West distance in statute miles.

(5) Determine the distance between the two reference points by the square root of the sum of the squares of the distances obtained in subparagraphs (3) and (4) of this paragraph, that is:

$$D=(L_a^2+L_o^2)^{1/2}$$

where:

D = Distance in statute miles
L_a = North-South distance in miles (from subparagraph (3) of this paragraph)
L_o = East-West distance in miles (from subparagraph (4) of this paragraph)

In computing the above, sufficient decimal figures shall be used to determine the distance to the nearest mile.

§ 73.612 Protection from interference.

(a) Permittees and licensees of television broadcast stations are not protected from any interference which may be caused by the grant of a new station or of authority to modify the facilities of an existing station in accordance with the provisions of this subpart. The nature and extent of the protection from interference accorded to television broadcast stations is limited solely to the protection which results from the minimum assignment and station separation requirements and the rules and regulations with respect to maximum powers and antenna heights set forth in this subpart.

(b) When the Commission determines that grant of an application would serve the public interest, convenience, and necessity and the instrument of authorization specifies an antenna location in a designated antenna farm area which results in mileage separation less than those specified in this subpart, TV broadcast station permittees and licensees shall be afforded protection from interference equivalent to the protection afforded under the minimum mileage separations specified in this subpart.

NOTE: The nature and extent of the protection from interference accorded to television broadcast stations which were authorized prior to April 14, 1952, and which were operating on said date is limited not only as specified above but is further limited by any smaller separations existing between such stations on said date. Where, as a result of the adoption of the Table of Assignments, or of changes in transmitter sites made by such stations after said date, separations smaller than the required minimum are increased but still remain lower than the required minimum, protection accorded such stations will be limited to the new separations.

[28 F.R. 13660, Dec. 14, 1963, as amended at 32 F.R. 8814, June 21, 1967]

§ 73.613 Main studio location.

(a) The main studio of a television broadcast station shall be located in the principal community to be served. Where the principal community to be served is a city, town, village or other political subdivision, the main studio shall be located within the corporate boundaries of such city, town, village or other political subdivision. Where the principal community to be served does not have specifically defined political boundaries, applications will be considered on a case-to-case basis in the light of the particular facts involved to determine whether the main studio is located within the principal community to be served.

(b) Where an adequate showing is made that good cause exists for locating a main studio outside the principal community to be served and that to do so would be consistent with the operation of the station in the public interest, the Commission will permit the use of a main studio location other than that specified in paragraph (a) of this section. No relocation of a main studio to a point outside the principal community to be served, or from one such point outside the community to another, may be made without first securing a modification of construction permit or license. FCC Form 301 shall be used to apply therefor. The main studio may, however, be relocated within the principal community to be served or be moved from a location outside the community to one within it without specific authority, but the Commission shall be notified promptly of any such relocation.

[28 F.R. 13660, Dec. 14, 1971, as amended at 36 F.R. 3266, Feb. 20, 1971; 36 F.R. 5420, Mar. 23, 1971]

§ 73.614 Power and antenna height requirements.

(a) *Minimum requirements.* Applications will not be accepted for filing if they specify less than —10 dbk (100 watts) visual effective radiated power in any horizontal direction. No minimum antenna height above average terrain is specified.

(b) *Maximum power*. Applications will not be accepted for filing if they specify a power in excess of that provided for in this paragraph. Except as provided in subparagraph (1) of this paragraph, the maximum effective radiated powers of television broadcast stations operating on the channels set forth below with antenna heights not in excess of 2,000 feet above average terrain shall be as follows:

Channel Nos.	Maximum visual effective radiated power in db. above one kilowatt (dbk.)
2-6	20 dbk. (100 kw.).
7-13	25 dbk. (316 kw.).
14-83	37 dbk. (5000 kw.).[1]

[1] The maximum visual effective radiated power of television broadcast stations operating on Channels 14–83 within 250 miles of the Canadian-United States border may not be in excess of 30 dbk (1000 kw).

(1) In Zone I, on Channels 2–13, inclusive, the maximum powers specified above for these channels may be used only with antenna heights not in excess of 1,000 feet above average terrain. Where antenna heights exceeding 1,000 feet above average terrain are used on Channels 2–13, or antenna heights exceeding 2,000 feet above average terrain are used on Channels 14–83, the maximum power shall be based on the chart designated as Figure 3 of § 73.699.

Note: This limitation shall not apply to any licensee or permittee in Zone I who received an authorization after March 22, 1951, to relocate its transmitter site and construct a new tower and antenna to a height in excess of 1000 feet above average terrain and who constructed or who had substantially completed construction of said tower and antenna prior to April 14, 1952. In such case, maximum power may be utilized at the height above average terrain specified in the authorization. The limitation shall apply, however, where the tower or other principal supporting structure had been constructed prior to the date of such authorization.

(2) In Zones II and III, the maximum powers which may be used by television broadcast stations operating on the respective channels set forth in the above table with antenna heights exceeding 2,000 feet above average terrain shall be based on the chart designated as Figure 4 of § 73.699.

(3) The effective radiated power in any horizontal or vertical direction may not exceed the maximum values permitted by this section and Figures 3 and 4 of § 73.699.

(4) The maximum effective radiated power in any direction above the horizontal plane shall be as low as the state of the art permits and may not exceed the effective radiated power in the horizontal direction in the same vertical plane.

(c) *Determination of applicable rules*. The zone in which the transmitter of a television station is located or proposed to be located determines the applicable rules with respect to maximum antenna heights and powers for VHF stations when the transmitter is located in Zone I and the channel to be employed is located in Zone II, or the transmitter is located in Zone II and the channel to be employed is located in Zone I.

§ 73.615 Administrative changes in authorizations.

In the issuance of television broadcast station authorizations, the Commission will specify the transmitter output power and effective radiated power to the nearest 0.1 dbk. Powers specified by kilowatts shall be obtained by converting dbk to kilowatts to 3 significant figures. Antenna heights above average terrain will be specified to the nearest 10 feet. Midway figures will be authorized in the lower alternative.

APPLICATIONS AND AUTHORIZATIONS

§ 73.620 Cross reference.

See Subpart D of Part 1 of this chapter for general requirements as to applications, filing of applications and description of application forms, other forms and information to be filed with the Commission, the manner in which applications are processed, and provisions applying to action on applications. See § 1.1111 of Subpart G of that part for the fees to be paid in connection with applications for facilities in the service covered in this subpart.

§ 73.621 Noncommercial educational stations.

In addition to the other provisions of this subpart, the following shall be applicable to noncommercial educational television broadcast stations:

(a) Except as provided in paragraph (b) of this section, noncommercial educational broadcast stations will be licensed only to nonprofit educational organizations upon a showing that the proposed stations will be used primarily to serve the educational needs of the community; for the advancement of educational programs; and to furnish a nonprofit and noncommercial television broadcast service.

(1) In determining the eligibility of publicly supported educational organizations, the accreditation of their respective state departments of education shall be taken into consideration.

(2) In determining the eligibility of privately controlled educational organizations, the accreditation of state departments of education or recognized regional and national educational accrediting organizations shall be taken into consideration.

(b) Where a municipality or other political subdivision has no independently constituted educational organization such as, for example, a board of education having autonomy with respect to carrying out the municipality's educational program, such municipality shall be eligible for a noncommercial educational television broadcast station. In such circumstances, a full and detailed showing must be made that a grant of the application will be consistent with the intent and purpose of the Commission's rules and regulations relating to such stations.

(c) Noncommercial educational television broadcast stations may transmit educational, cultural and entertainment programs, and programs designed for use by schools and school systems in connection with regular school courses, as well as routine and administrative material pertaining thereto.

(d) A noncommercial educational television station may broadcast programs produced by or at the expense of, or furnished by persons other than the licensee, if no other consideration than the furnishing of the program and the costs incidental to its production and broadcast are received by the licensee. The payment of line charges by another station, network, or someone other than the licensee of a noncommercial educational television station, or general contributions to the operating costs of a station, shall not be considered as being prohibited by this paragraph.

(e) Each station shall furnish a nonprofit and noncommercial broadcast service. However, noncommercial educational television stations shall be subject to the provisions of § 73.654 to the extent that they are applicable to the broadcast of programs produced by, or at the expense of, or furnished by others, except that no announcements (visual or aural) promoting the sale of a product or service shall be broadcast in connection with any program: *Provided, however,* That where a sponsor's name or product appears on the visual image during the course of a simultaneous or rebroadcast program either on the backdrop or in similar form, the portions of the program showing such information need not be deleted.

NOTE 1: Announcements of the producing or furnishing of programs, or the provision of funds for their production, may be no more than twice, at the opening and at the close of any program, except that where a program lasts longer than 1 hour an announcement may be made at hourly intervals during the program if the last such announcement occurs at least 15 minutes before the announcement at the close of the program. The person or organization furnishing or producing the program, or providing funds for its production, shall be identified by name only, except that in the case of a commercial company having *bona fide* operating divisions or subsidiaries one of which has furnished the program or funds, the division or subsidiary may be mentioned in addition to or instead of the commercial company. No material beyond the company (or division or subsidiary) name shall be included. Upon request for waiver of this provision, the Commission may authorize the inclusion of brief additional descriptive material only when deemed necessary to avoid confusion with another company having the same or a similar name. No mention shall be made of any product or service with which a commercial enterprise being identified has a connection, except to the extent the name of the product or service is the same as that of the enterprise (or division or subsidiary) and is so included. A repeat broadcast of a particular program is considered a separate program for the purpose of this note.

NOTE 2: Announcements may be made of general contributions of a substantial nature which make possible the broadcast of programs for part, or all, of the day's schedule. Such announcements may be made at the opening and closing of the day or segment, including all of those persons or organizations whose substantial contributions are making possible the broadcast day or segment. In addition, one such general contributor may be identified once during each hour of the day or segment. The provisions of Note 1 of this section as to permissible contents apply to announcements under this note.

NOTE 3: The limitations on credit announcements imposed by Notes 1 and 2 of this section shall not apply to program material, the production of which was completed before January 1, 1971, or to other announcements broadcast before January 1, 1971, pursuant to underwriting agreements entered into before November 30, 1970.

NOTE 4: The provisions of Notes 1 and 2 of this section shall not apply during the broadcast times in which "auctions" are held to finance station operation. Credit announcements during "auction" broadcasts may identify particular products or services, but shall not include promotion of such products or services beyond that necessary for the specific auction purpose. Visual exposure may be given to a display in the auction area including the underwriter's name and trademark, and product or service or a representation thereof.

NOTE 5: The numerical limitations on permissible announcements contained in Notes 1 and 2 of this section do not apply to announcements on behalf of noncommercial, nonprofit entities, such as the Corporation for Public Broadcasting, State or regional entities, or charitable foundations.

[28 F.R. 13660, Dec. 14, 1963, as amended at 35 F.R. 7558, May 15, 1970; 35 F.R. 17552, Nov. 14, 1970]

§ 73.622 Applications for sharing of television channels.

Separate applications shall be filed by each applicant for the voluntary sharing of television channels. Such applications shall be accompanied by copies of the time-sharing agreement under which the applicants propose to operate.

§ 73.623 Notification of filing of applications.

(a) *Radio Astronomy and Radio Research Installations*. In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, West Virginia, and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, West Virginia, an applicant for authority to construct a new television broadcast station or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39°15′ N. on the north, 78°30′ W. on the east, 37°30′ N. on the south, and 80°30′ W. on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P.O. Box #2, Green Bank, West Virginia, 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity, if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the Observatory. After receipt of such application, the Commission will allow a period of twenty (20) days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the twenty-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(b) *Location on Government land*. Applicants proposing to construct a radio station on a site located on land under the jurisdiction of the U.S. Forest Service, U.S. Department of Agriculture, or the Bureau of Land Management, U.S. Department of the Interior, must supply the information and must follow the procedure prescribed by § 1.70 of this chapter.

[28 F.R. 13660, Dec. 14, 1963, as amended at 32 F.R. 2891, Feb. 15, 1967]

§ 73.628 Equipment tests.

(a) During the process of construction of a television broadcast station, the permittee, after notifying the Commission and Engineer in Charge of the radio district in which the station is located, may, without further authority of the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations.

(b) The Commission may notify the permittee not to conduct tests or may cancel, suspend, or change the date for the beginning of equipment tests, if and when such action may appear to be in the public interest, convenience, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid.

(d) Inspection of a station will ordinarily be required during the equipment test period and before the commencement of program tests. After construction and after adjustments and measurements have been completed to show compliance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations, the permittee should notify the Engineer in Charge of the radio district in which the station is located that it is ready for inspection.

(e) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

§ 73.629 Program tests.

(a) Upon completion of construction of a television broadcast station in accordance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations, and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee may request authority to conduct program tests: *Provided*, That such request shall be filed with the Commission at least ten (10) days prior to the date on which it is desired to begin such operation and that the Engineer in Charge of the radio district in which the station is located is notified. (All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the license application.)

(b) Program tests shall not commence until specific Commission authority is received. The Commission reserves the right to change the date of the beginning of such tests or to suspend or revoke the authority for program tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Unless sooner suspended or revoked, the program test authority continues valid during Commission consideration of the application for license and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated by final determination upon the application for station license.

(d) All operation under program test authority shall be in strict compliance with the rules governing television broadcast stations and in strict accordance with representations made in the application for license pursuant to which the tests were authorized.

(e) The granting of program test authority shall not be construed as approval by the Commission of the application for station license.

(f) Where a 1,000-watt UHF television translator station has been authorized, pursuant to § 1.516(c) of this chapter, to operate on a channel to which a television station is authorized but not operating and the permittee or licensee of such nonoperating television station intends to commence or resume operation, the licensee or permittee of the television station shall notify the licensee or permittee of the translator station, in writing, not less than 10 days prior to the commencement or resumption of operation, of its intention and shall certify to the Commission that such notice has been given.

[28 F.R. 13660, Dec. 14, 1963, as amended at 36 F.R. 19591, Oct. 8, 1971]

§ 73.630 Normal license period.

(a) Initial licenses for television broadcast stations will ordinarily be issued for a period running until the date specified in this section for the State or territory in which the station is located or, if issued after such date, to the next triennial renewal date determined in accordance with this section; and, when renewed, will normally be renewed for 3 years: *Provided, however*, That, if the Commission finds that the public interest, convenience or necessity will be served thereby, it may issue either an initial license or a renewal thereof for a lesser term. The time of expiration of normally issued initial and renewed licenses will be 3 a.m., local time, on the following dates, and at 3-year intervals thereafter:

(1) For stations located in Iowa and Missouri, February 1, 1968.

(2) For stations located in Minnesota, North Dakota, South Dakota, Montana, and Colorado, April 1, 1968.

(3) For stations located in Kansas, Oklahoma, and Nebraska, June 1, 1968.

(4) For stations located in Texas, August 1, 1968.

(5) For stations located in Wyoming, Nevada, Arizona, Utah, New Mexico, and Idaho, October 1, 1968.

(6) For stations located in California, December 1, 1968.

(7) For stations located in Washington, Oregon, Alaska, Guam, and Hawaii, February 1, 1969.

(8) For stations located in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, April 1, 1969.

(9) For stations located in New Jersey and New York, June 1, 1969.

(10) For stations located in Delaware and Pennsylvania, August 1, 1969.

(11) For stations located in Maryland, District of Columbia, Virginia, and West Virginia, October 1, 1969.

(12) For stations located in North Carolina and South Carolina, December 1, 1969.

(13) For stations located in Florida, Puerto Rico, and Virgin Islands, February 1, 1970.

(14) For stations located in Alabama and Georgia, April 1, 1970.

(15) For stations located in Arkansas, Louisiana, and Mississippi, June 1, 1970.

(16) For stations located in Tennessee, Kentucky, and Indiana, August 1, 1970.

(17) For stations located in Ohio and Michigan, October 1, 1970.

(18) For stations located in Illinois and Wisconsin, December 1, 1970.

NOTE: For the cutoff date for the filing of applications mutually exclusive with, and petitions to deny, renewal applications, see § 1.516(e) of this chapter.

[33 F.R. 4413, Mar. 12, 1968, as amended at 34 F.R. 7967, May 21, 1969]

§ 73.635 Use of common antenna site.

No television license or renewal of a television license will be granted to any person who owns, leases, or controls a particular site which is peculiarly suitable for television broadcasting in a particular area and (a) which is not available for use by other television licensees; and (b) no other comparable site is available in the area; and (c) where the exclusive use of such site by the applicant or licensee would unduly limit the number of television stations that can be authorized in a particular area or would unduly restrict competition among television stations.

§ 73.636 Multiple ownership.

(a) No license for a television broadcast station shall be granted to any party (including all parties under common control) if:

(1) Such party directly or indirectly owns, operates, or controls: one or more television broadcast stations and the grant of such license will result in any overlap of the Grade B contours of the existing and proposed stations, computed in accordance with § 73.684; or one or more standard broadcast stations and the grant of such license will result in the Grade A contour of the proposed station, computed in accordance with § 73.684, encompassing the entire community of license of one of the standard broadcast stations, or will result in the predicted or measured 2 mv/m groundwave contour(s) of the standard broadcast station(s), computed in accordance with § 73.183 or § 73.186, encompassing the entire community of license of the proposed station; or one or more FM broadcast stations and the grant of such license will result in the Grade A contour of the proposed station, computed in accordance with § 73.684, encompassing the entire community of license of one of the FM broadcast stations, or will result in the predicted 1 mv/m contour of the FM broadcast station(s), computed in accordance with § 73.313, encompassing the entire community of license of the proposed station; or

(2) Such party, or any stockholder, officer or director of such party, directly or indirectly owns, operates, controls, or has any interest in, or is an officer or director of any other television broadcast station if the grant of such license would result in a concentration of control of television broadcasting in a manner inconsistent with public interest, convenience, or necessity. In determining whether there is such a concentration of control, consideration will be given to the facts of each case with particular reference to such factors as the size, extent and location of area served, the number of people served, and the extent of other competitive service to the areas in question. The Commission, however, will in any event consider that there would be such a concentration of control contrary to the public interest, convenience or necessity for any party or any of its stockholders, officers or directors to have a direct or indirect in-

terest in, or be stockholders, officers, or directors of, more than seven television broadcast stations, no more than five of which may be in the VHF band.

(b) Paragraph (a) of this section is not applicable to noncommercial educational stations.

NOTE 1: The word "control" as used herein is not limited to majority stock ownership, but includes actual working control in whatever manner exercised.

NOTE 2: In applying the provisions of paragraph (a)(1) of this section, partial (as well as total) ownership interests in corporate broadcast licensees represented by ownership of voting stock of such corporations will be considered.

NOTE 3: Except as provided in Note 4 of this section, in applying the provisions of paragraphs (a)(1) and (a)(2) of this section to the stockholders of a corporation which has more than 50 voting stockholders, only those stockholders need be considered who are officers or directors or who directly or indirectly own 1 percent or more of the outstanding voting stock.

NOTE 4: In applying the provisions of paragraphs (a)(1) and (a)(2) of this section to the stockholders of a corporation which has more than 50 voting stockholders, an investment company, as defined in 15 U.S.C. section 80a–3 (commonly called a mutual fund), need be considered only if it directly or indirectly owns 3 percent or more of the outstanding voting stock or if officers or directors of the corporation are representatives of the investment company. Holdings by investment companies under common management shall be aggregated.

NOTE 5: In calculating the percentage of ownership of voting stock under the provisions of Note 4, if an investment company directly or indirectly owns voting stock in a company which in turn directly or indirectly owns 50 percent or more of the voting stock of a corporate broadcast licensee, the investment company shall be considered to own the same percentage of outstanding shares of the corporate broadcast station licensee as it owns of the outstanding voting shares of the company standing between it and the licensee corporation. If the intermediate company owns less than 50 percent of the voting stock of a corporate broadcast station licensee, the holding of the investment company need not be considered under the 3-percent rule, but, officers or directors of the licensee corporation who are representatives of the intermediate company shall be deemed to be representatives of the investment company.

NOTE 6: In applying the provisions of paragraphs (a)(1) and (a)(2) of this section to the stockholders of a corporation which has more than 50 voting stockholders, a bank holding stock through its trust department in trust accounts need be considered only if such bank directly or indirectly owns 5 percent or more of the outstanding voting stock: *Provided*, The bank files a disclaimer of intent to control the management or policies of the broadcast corporation. Holdings by banks shall be aggregated if the bank has any right to determine how the stock will be voted.

NOTE 7: In cases where record and beneficial ownership of voting stock of a corporate broadcast station licensee which has more than 50 voting stockholders are not identical, e.g., bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street name for the benefit of customers, trusts holding stock as record owners for the benefit of designated parties, the party having the right to determine how the stock will be voted will be considered to own it for the purposes of these rules.

NOTE 8: Paragraph (a)(1) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities. Said paragraph will not apply to applications for assignment of license or transfer of control filed in accordance with § 1.540(b) or § 1.541(b) of this chapter, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy if no new or increased overlap would be created between commonly owned, operated, or controlled television broadcast stations and if no new encompassment of communities proscribed in paragraph (a)(1) of this section as to commonly owned, operated, or controlled television broadcast stations and standard or FM broadcast stations would result. Said paragraph will apply to all applications for new stations, to all other applications for assignment or transfer, and to all applications for major changes in existing stations except major changes that will result in overlap of contours of television broadcast stations with each other no greater than that already existing. (The resulting areas of overlap of contours of television broadcast stations with each other in such major change cases may consist partly or entirely of new terrain. However, if the population in the resulting overlap areas substantially exceeds that in the previously existing overlap areas, the Commission will not grant the application if it finds that to do so would be against the public interest, convenience, and necessity.) Said paragraph will not apply to major changes in UHF television broadcast stations authorized as of September 30, 1964, which will result in Grade B overlap with another television broadcast station that was commonly owned, operated, or controlled as of September 30, 1964; or to any application concerning a UHF television broadcast station which would result in the Grade A contour of the UHF station encompassing the entire community of license of a commonly owned, operated, or controlled standard or FM broadcast station or which would result in the entire community of license of such UHF station being encompassed by the 2 mv/m or 1 mv/m contours of such standard or FM broadcast stations, respectively. Such UHF overlap or community encompassment cases will be handled on a case-by-case basis in order to determine whether common ownership, operation, or control of the stations in question would be in the public interest. Commonly owned, operated, or controlled broadcast stations with overlapping contours or with community-encompassing contours prohibited by paragraph (a)(1) of this section may not be assigned or transferred to a single person, group, or entity, except as provided in this note.

NOTE 9: Paragraph (a)(1) of this section will not be applied to cases involving television stations which are primarily "satellite" operations. Such cases will be considered on a case-by-case basis in order to determine whether common ownership, operation, or control of the stations in question would be in the public interest. Whether or not a particular television broadcast station which does not present a substantial amount of locally originated programing is primarily a "satellite" operation will be determined on the facts of the particular case. An authorized and operating "satellite" television station the Grade B contour of which overlaps that of a commonly owned, operated, or controlled "non-satellite" parent television station, or the Grade A contour of which completely encompasses the community of license of a commonly owned operated, or controlled standard or FM broadcast station, or the community of license of which is completely encompassed by the 2 mv/m contour of such a standard broadcast station, or the 1 mv/m contour of such an FM broadcast station, may subsequently become a "non-satellite" station with local studios and locally originated programing. However, such commonly owned, operated, or controlled "non-satellite", or controlled stations with Grade B overlap, or such commonly owned, operated, or controlled "non-satellite" television stations and standard or FM stations with the aforementioned community encompassment, may not be transferred or assigned to a single person, group, or entity except as provided in Note 7.

[28 F.R. 13660, Dec. 14, 1971, as amended at 29 F.R. 13900, Oct. 8, 1964; 30 F.R. 578, Jan. 16, 1965; 33 F.R. 9084, June 20, 1968; 35 F.R. 7259, May 8, 1970; 36 F.R. 4290, Mar. 4, 1971; 37 F.R. 9777, May 17, 1972]

§ 73.637 Alternate main transmitters.

The licensee of a television broadcast station may be licensed for alternate main transmitters provided that a technical need for such alternate transmitters is shown and that the following conditions are met:

(a) Both transmitters are located at the same place.

(b) Both transmitters shall have the same power rating.

(c) Both transmitters shall meet the construction, installation, operation and performance requirements of this subpart.

§ 73.638 Auxiliary transmitter.

Upon showing that a need exists for the use of auxiliary transmitters in addition to the regular transmitters of a television station, a license therefor may be issued: *Provided*, That:

(a) Auxiliary transmitters may be installed either at the same location as the main transmitters or at another location.

(b) A licensed operator shall be in control whenever auxiliary transmitters are placed in operation.

(c) The auxiliary transmitters shall be maintained so that they may be put into immediate operation at any time for the following purposes:

(1) The transmission of the regular programs upon the failure of the main transmitters.

(2) The transmission of regular programs during maintenance or modification work on the main transmitters necessitating discontinuance of their operation for a period not to exceed 5 days.

NOTE: This includes the equipment changes which may be made without authority as set forth elsewhere in the rules and regulations or as authorized by the Commission by letter or by construction permit. Where such operation is required for periods in excess of 5 days, request therefor shall be in accordance with § 1.542 of the Commission's rules and regulations.

(3) Upon request by a duly authorized representative of the Commission.

(d) The auxiliary transmitters shall be tested at least once each week to determine that they are in proper operating condition and that they are adjusted to the proper frequency, except that in the case of operation in accordance with paragraph (c) of this section during any week, the test in that week may be omitted provided the operation under paragraph (c) of this section is satisfactory. A record shall be kept of the time and result of each test. Such records shall be retained for a period of two years.

(e) The auxiliary transmitters shall be equipped with satisfactory control equipment which will enable the maintenance of the frequency emitted by the station within the limits prescribed by the regulations in this subpart.

(f) The operating power of an auxiliary transmitter may be less than the authorized power of the main transmitters, but in no event shall it be greater than such power.

§ 73.639 Changes in equipment and antenna system.

Licensees of television broadcast stations shall observe the following provisions with regard to changes in equipment and antenna system:

(a) No changes in equipment shall be made:

(1) That would result in the emission of signals outside of the authorized channel.

(2) That would result in the external performance of the transmitter being in disagreement with that prescribed in this subpart.

(b) Specific authority, upon filing formal application therefor (FCC Form 301 or such other form as is provided therefor), is required for any of the following:

(1) Changes involving an increase or decrease in the power rating of the transmitters.

(2) A replacement of the transmitters as a whole.

(3) Change in the location of the transmitting antenna.

(4) Change in antenna system, including transmission line.

(5) Change in the power delivered to the antenna.

(6) Change in frequency control and/or modulation system.

(c) Other changes, except as above provided for in this section or in the provisions of this subpart, may be made at any time without the authority of the Commission, provided that the Commission shall be promptly notified thereof and such changes shall be shown in the next application for renewal of license.

§ 73.640 Acceptability of broadcast transmitters for licensing.

(a) In order to facilitate the filing of, and action on, applications for station authorizations, transmitters will be accepted for licensing by the Commission under one of the following conditions:

(1) A transmitter may be type-accepted upon the request of any manufacturer of transmitters built in quantity by following the type acceptance procedure set forth in Part 2 of this chapter, provided that the date and information submitted indicates that the transmitter meets the requirements of § 73.687. If accepted, such transmitter will be included on the Commission's "Radio Equipment List". Applicants specifying transmitters included on such a list need not submit detailed descriptions and diagrams where the correct type number is specified, if the equipment proposed is identical with that accepted. Copies of this list are available for inspection at the Commission's office in Washington, D.C., and at each of its field offices.

(2) An application specifying a transmitter not included on the Radio Equipment List may be accepted upon the request of a prospective licensee submitting with the application for construction permit a complete description of the transmitter, including the circuit diagram, listing of all tubes used, function of each, multiplication in each stage, plate current and voltage applied to each tube, a description of the oscillator circuit together with any devices installed for the purpose of frequency stabilization and the means of varying output power to compensate for power supply voltage variations. However, if this data has been filed with the Commission by a manufacturer in connection with a request for type acceptance, it need not be submitted with the application for construction permit but may be referred to as "on file." Measurement data for type acceptance made in accordance with subparagraph (1) of this paragraph shall be submitted with the license application.

(3) A transmitter shown on an instrument of authorization by manufacturer and type number, or as a composite, and which was in use prior to June 30, 1955, may continue to be used by the licensee, his successors or assignees, provided such transmitter continued to comply with the rules and regulations.

(b) Additional rules with respect to withdrawal of type acceptance, modification of type-accepted equipment and limitations on the findings upon which type acceptance is based are set forth in Part 2 of this chapter.

[28 F.R. 13660, Dec. 14, 1963, as amended at 33 F.R. 15422, Oct. 17, 1968]

OVER-THE-AIR SUBSCRIPTION TELEVISION OPERATIONS

§ 73.641 Definitions.

(a) *Subscription television*. A system whereby subscription television broadcast programs are transmitted and received.

(b) *Subscription television broadcast program*. A television broadcast program intended to be received in intelligible form by members of the public only for a fee or charge.

[33 F.R. 19149, Dec. 21, 1968]

§ 73.642 Licensing policies.

(a) Subscription television service may be provided only upon specific authorization therefor by the Commission. Such authorization will be issued only to:

(1) The licensee of a commercial television broadcast station;

(2) The holder of a construction permit for a new commercial television broadcast station; or

(3) An applicant for a construction permit for a new commercial television broadcast station: *Provided, however*, That such authorization will not be issued prior to issuance of the construction permit for the new station.

Moreover, such an authorization will be issued only for a station the principal community of which is located entirely within the Grade A contours of five or more commercial television broadcast stations (including the station of the applicant), whether the principal community each station is authorized to serve is the same as that of the applicant, or is a nearby community. Only one such authorization will be granted in any community. No such authorization will be granted unless, not counting the station of the applicant, at least four of the stations which include the community of the applicant within their Grade A contours are operating nonsubscription stations.

(b) Application for such authorizations shall be made in the manner and form prescribed by the Commission. If the Commission, upon consideration of such application finds that the public interest, convenience and necessity would be served by the granting thereof, it will grant such application. In the event it is unable to make such a finding, the Commission will then formally designate the application for subscription television authorization for hearing and proceed pursuant to the provisions of section 309(e) of the Communications Act and the Commission's rules and regulations applicable thereto. The Commission may impose such conditions upon the grant as may be appropriate.

(c) Holders of subscription television authorizations shall complete construction of subscription television transmitting facilities within a period of 8 months after issuance of the authorization unless otherwise determined by the Commission upon proper showing in any particular case. During the process of construction of the subscription television facilities, the holder of the authorization, after notifying the Commission and the Engineer in Charge of the radio district in which the station is located, may, without further authority of the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the authorization, the technical provisions of the application therefor, and the rules and regulations. The Commission may notify the holder of the authorization not to conduct tests if such tests appear to be contrary to the public interest, convenience, and necessity. Upon completion of the construction, the holder of the authorization shall submit a detailed showing that compliance with the terms of the authorization, the technical provisions of the application therefor, and the rules and regulations has been achieved. No subscription television operation shall commence until requirements of this paragraph have been fulfilled and operation has been specifically authorized by the Commission.

(d) A subscription television authorization will not be issued or renewed for a period longer than the regular license period of the applicant's television broadcast authorization. Renewals of such authorizations will usually be considered together with renewals of the regular station authorizations.

(e) No subscription television authorization or renewal thereof shall be granted to a party having any contract, arrangement, or understanding, expressed or implied, which:

(1) Prevents or hinders it from rejecting or refusing any subscription

television broadcast program which it reasonably believes to be unsatisfactory or unsuitable or contrary to the public interest; or substituting a subscription or conventional program which in its opinion is of greater local or national importance; or

(2) Delegates to any other person the right to schedule the hours of transmission of subscription programs: *Provided*, however, That this rule shall not prevent a licensee, permittee, or applicant from entering into an agreement or arrangement whereby it agrees to schedule a specific subscription television broadcast program at a specific time or to schedule a specific number of hours of subscription programs during the broadcast day (or segments thereof) or week subject to Commission approval; or

(3) Prevents or hinders it from, or penalizes it for, making a free choice of subscription programs, whatever their source: *Provided, however*, That upon making a satisfactory showing to the Commission that the public interest would be served by permitting the licensee, permittee, or applicant to enter into an agreement or arrangement whereby it agrees to obtain all or a specified portion of its programing from one or more sources, this rule may be waived; or

(4) Deprives it of the right of ultimate decision concerning the maximum amount of any subscription program charge or fee.

(f) No subscription television authorization or renewal thereof shall be granted to a party having any contract, arrangement, or understanding, expressed or implied, with other parties the provisions of which do not comply with the following policies of the Commission:

(1) Unless a satisfactory signal is unavailable at the location where service is desired, subscription television service shall be provided to all persons desiring it within the Grade A contour of the nonsubscription television service provided by the station broadcasting subscription programs: *Provided, however*, That geographic or other reasonable patterns of installation for new subscription services shall be permitted: *And provided further*, That, for good cause, service may be terminated.

(2) Charges, terms and conditions of service to subscribers shall be applied uniformly: *Provided, however*, That subscribers may be divided into reasonable classifications approved by the Commission, and the imposition of different sets of terms and conditions may be applied to subscribers in different classifications: *And provided further*, That within such classifications deposits to assure payment may, for good cause, be required of some subscribers and not of others; and, also for good cause, if a subscription system generally uses a credit-type decoder cash operated decoders may be installed for some subscribers.

(3) Subscription television decoders shall be leased, and not sold, to subscribers.

(g) All applications for subscription television authorization or renewal shall set forth, in such detail as the Commission may require, the terms of agreements and arrangements the applicant has or intends to have with other parties concerning the supplying of subscription television programs, including specifically any provision that such programs shall be presented at a particular time or during a certain number of hours during the day (or segments thereof) or week, any arrangement or understanding which might hinder or prevent the presentation of programs from different sources, or penalize the applicant for so doing, and, as to any arrangement or understanding with a party other than the producer of the program, any other arrangement or understanding of which the applicant has knowledge, between such other party and third parties, which prevents or hinders such other party from obtaining programs from different sources. The applicant shall use due diligence to ascertain the existence and nature of arrangements to which it is not a party.

[33 F.R. 19149, Dec. 21, 1968, as amended at 34 F.R. 14375, Sept. 13, 1969]

§ 73.643 General operating requirements.

(a) No commercial advertising announcements shall be carried during subscription television operations except for promotion of subscription television broadcast programs before and after such programs.

(b) Subscription television broadcast programs shall comply with the following requirements:

(1) Feature films shall not be broadcast which have had general release in theaters anywhere in the United States more than 2 years prior to their sub-

scription broadcast: *Provided, however,* That during 1 week of each calendar month one feature film the general release of which occurred more than 10 years previously may be broadcast, and more than a single showing of such a film may be made during that week: *Provided, further,* That feature films the general release of which occurred between 2 and 10 years before proposed subscription broadcast may be broadcast upon a convincing showing to the Commission that a bona fide attempt has been made to sell the films for conventional television broadcasting and that they have been refused, or that the owner of the broadcast rights to the films will not permit them to be televised on conventional television because he has been unable to work out satisfactory arrangements concerning editing for presentation thereon, or perhaps because he intends never to show them on conventional television since to do so might impair their repetitive box office potential in the future.

NOTE: As used in this subparagraph, "general release" means the first-run showing of a feature film in a theater or theaters in an area, on a nonreserved-seat basis, with continuous performances. For first-run showings of feature films on a nonreserved-seat basis which are not considered to be "general release" for purposes of this subparagraph, see note 56 in the Fourth Report and Order in Docket No. 11279, 15 F.C.C. 2d ______.

(2) Sports events shall not be broadcast live or on a same-day delayed basis which have been televised live, or same-day delayed, on a nonsubscription, regular basis in the community during any 1 year in the 5 years preceding their proposed subscription broadcast. If a regularly recurring event takes place at intervales of more than 1 year (e.g., summer Olympic games), the aforementioned proscription shall be 1 year in the preceding 10 years, rather than 1 year in the preceding 5 years. Moreover, new sports events that result from the restructuring of existing sports shall not be broadcast on a subscription basis until 5 years after their first occurrence; thereafter, subscription showing will be governed by the provisions of the first sentence of this subparagraph. Determinations as to whether new sports events that are not the result of the restructing of existing sports may be shown on a subscription basis will be made by the Commission as such new events occur.

NOTE 1: In determining whether a sports event has been televised in a community on a nonsubscription basis, only commercial television broadcast stations which place a Grade A contour over the entire community will be considered. Such stations need not necessarily be licensed to serve that community.

NOTE 2: The manner in which this subparagraph will be administered and in which "sports," "sports events," "New sports events," and "televised on a nonsubscription, regular basis" will be construed is explained in paragraphs 288–305 of the fourth Report and Order in Docket No. 11279, 15 FCC 2d 466, as modified by paragraphs 32–57 of the report and order in Docket No. 18893, 34 FCC 2d 271, 279—286.

(3) No series type of program with interconnected plot or substantially the same cast of principal characters shall be broadcast.

(4) Not more than 90 percent of the total subscription programing hours shall consist of feature films and sports events combined. The percentage calculations may be made on a yearly basis, but, absent a showing of good cause, the percentage of such programing hours may not exceed 95 percent of the total subscription programing hours in any calendar month.

(c) Any television broadcast station licensee or permittee authorized to broadcast subscription programs shall broadcast, in addition to its subscription broadcasts, at least the minimum hours of nonsubscription programing required by § 73.651.

(d) Except as they may be otherwise waived by the Commission in authorizations issued hereunder, the rules and policies applicable to regular television broadcast stations are applicable to subscription television operations.

[33 F.R. 19150, Dec. 21, 1968, as amended at 37 F.R. 6743, Apr. 4, 1972]

§ 73.644 Equipment and technical system performance requirements.

(a) No subscription television authorization will be granted unless the technical system to be used has been approved in advance by the Commission. Such advance approval may be applied for and granted in accordance with the following procedure, subject to the conditions and limitations set forth:

(1) A separate request for each different technical system shall be made by the applicant in writing.

(2) The applicant shall certify that the application was prepared by him or

at his direction and that the facts set forth are true and correct to the best of his knowledge and belief.

(3) The applicant shall identify the technical system by a name or type number and shall define the system in terms of its technical characteristics; a functional block diagram shall be included. In addition, a complete description of the encoded transmitted signal and the encoding and decoding equipment used by the applicant shall be supplied. The description of this equipment shall include circuit diagrams and photographs.

(4) Preliminary test data shall be submitted to show system capability with regard to compliance with the criteria set forth in paragraph (b) of this section.

(5) The applicant shall supply any additional information and test data requested by the Commission, to show to its satisfaction that the criteria set forth in paragraph (b) of this section are met.

(6) The information submitted by the applicant may be subject to check by field tests conducted without expense to the Commission or by tests by Commission personnel, if deemed necessary by the Commission.

(7) No technical system will be deemed approved unless and until the Commission has notified the applicant in writing of the approval. Such notification of approval will be by letter to the applicant.

(8) Approval by the Commission is limited to a determination that the particular technical system (the scheme for encoding and decoding the subscription television signal) is capable of meeting the criteria set forth in paragraph (b) of this section.

(9) The Commission shall maintain a listing of approved technical systems.

(10) Files containing information about subscription television systems submitted by applicants for approval of these technical systems pursuant to the rules in this part will not be open to the public.

NOTE: The procedure for advance approval of technical systems contained in this paragraph is effective in the interim pending amendment of Part 2 of this chapter to provide for "system type acceptance."

(b) The criteria for approval of subscription television technical systems by the Commission are as follows:

(1) The technical system shall be capable of operating by delivering a suitable signal to the antenna input terminals of receivers designed for reception of signals meeting the technical standards for color or monochrome television transmission and accompanying aural signal as set forth in this part. For the purpose of this requirement, a "suitable signal" shall be one which, except for distortion or attenuation occurring in the transmitting antenna, receiving antenna or the propagation medium, complies with all technical standards for color or monochrome transmission and accompanying aural signal set forth in this part.

(2) Spectral energy in transmission shall not exceed limitations set forth in § 73.687(i).

(3) No increase in width of the television broadcast channel (6 Mc/s) shall be required.

(4) The technical system shall enable stations transmitting subscription television programs to produce visual and aural signal coverage and receive program quality not significantly inferior, in the judgment of the Commission, to that produced by stations using the normal monochrome or color transmission standards set forth in this part without employing additional effective radiated power for either the visual or aural signals.

(5) The encoded visual and aural programs shall be recoverable without perceptible degradation as compared to the same programs transmitted in accordance with Commission monochrome and color standards.

(6) Internal modifications to subscribers' receivers shall not be required.

(7) Interference to reception of conventional television and subscription television programs, cochannel and adjacent channel, monochrome and color shall not significantly, in the judgment of the Commission, exceed that occurring from conventional television broadcasting conducted in compliance with the technical standards set forth in this part.

(8) Reception of subscription television programs shall not be, in the judgment of the Commission, significantly more susceptible to interference of any kind than reception of conventional television programs transmitted in accordance with the technical standards set forth in this part.

[34 F.R. 14375, Sept. 13, 1969]

GENERAL OPERATING REQUIREMENTS

§ 73.651 Time of operation.

(a) (1) All television broadcast stations will be licensed for unlimited time operation. Each such station shall maintain a regular program operating schedule as follows: Not less than 2 hours daily in any 5 broadcast days per week and not less than a total of 12 hours per week during the first 18 months of the station's operation; not less than 2 hours daily in any 5 broadcast days per week and not less than a total of 16 hours, 20 hours and 24 hours per week for each successive 6-month period of operation, respectively; and not less than 2 hours in each of the 7 days of the week and not less than a total of 28 hours per week thereafter.

(2) "Operation" includes the period during which a station is operated pursuant to temporary authorization or during program tests, as well as during the license period. Time devoted to test patterns, or to aural presentations accompanied by the incidental use of fixed visual images which have no substantial relationship to the subject matter of such aural presentations, shall not be considered in computing periods of program service.

(3) In the event that causes beyond a licensee's control make it impossible to adhere to the operating schedule in subparagraph (1) of this paragraph or to continue operating, the station may limit or discontinue operation for a period of not more than 10 days, without further authority of the Commission. However, the Commission and the Engineer in Charge of the radio district in which the station is located shall be immediately notified in writing if the station is unable to maintain the minimum operating schedule and shall be subsequently notified when the station resumes regular operation.

(b) Noncommercial educational television broadcast stations are not required to operate on a regular schedule and no minimum number of hours of operation is specified; but the hours of actual operation during a license period shall be taken into consideration in considering the renewal of noncommercial educational television broadcast licenses.

(c) (1) The aural transmitter of a television station shall not be operated separately from the visual transmitter except for the following purposes:

(i) For actual tests of station equipment or actual experimentation in accordance with § 73.666; and

(ii) For emergency "fills" in case of visual equipment failure or unscheduled and unavoidable delays in presenting visual programs. In such situations the aural transmitter may be used to advise the audience of difficulties and to transmit for a short period program material of such nature that the audience will be enabled to remain tuned to the station; for example, music or news accompanying a test pattern or other visual presentation.

(2) During periods of transmission of a test pattern on the visual transmitter of a television station, aural transmission shall consist only of a single tone or series of variable tones. During periods when still pictures or slides are employed to produce visual transmissions which are accompanied by aural transmissions, the aural and visual transmissions shall be integral parts of a program or announcement and shall have a substantial relationship to each other: *Provided*, That nothing herein shall preclude the transmission of a test pattern, still pictures or slides for the following purposes and periods:

(i) To accompany aural announcements of the station's program schedule and aural news broadcasts or news commentaries, for a total period not to exceed one hour in any broadcast day.

(ii) To accompany aural transmissions for a period of time not to exceed fifteen minutes immediately prior to the commencement of a programming schedule.

Examples (1) Duplication of AM or FM programs on the aural transmitter of a television station while the same program is broadcast on the visual transmitter (i.e., a "simulcast") is consistent with this paragraph.

(2) Duplication of AM or FM programs on the aural transmitter of a television station while a test pattern is broadcast on the visual transmitter is not consistent with this paragraph, except for the specific purposes and periods specified in paragraph (c) (2).

(3) A travel lecture in which the words of the lecturer are broadcast simultaneously with still pictures or slides of scenes illustrating the lecture, and a newscast in which the words of the newscaster are broadcast simultaneously with still pictures or slides of the news events, are examples of programs in which the aural and visual transmissions are integral parts of the same program having a substantial relationship to each other.

within the meaning of paragraph (c) (2). Mood music unrelated to the visual transmission is not consistent with this paragraph.

(4) The broadcast of a test pattern accompanied by a musical composition for the purpose of demonstration, sale, installation or orientation of television receivers, or receiving antennas is not consistent with this paragraph.

(5) Music accompanying the transmission of a test pattern upon which is visually imposed a moving text consisting of continuous program material, such as a running newscast or news commentary, is consistent with this paragraph.

(6) Music accompanying the transmission of a test pattern upon which is visually imposed a clock indicating the time of day, or a text that is changed at spaced intervals, is not consistent with this paragraph.

§ 73.652 Station identification.

See § 73.1201.

[34 F.R. 19762, Dec. 17, 1969]

§ 73.653 Mechanical reproductions.

(a) No mechanically reproduced program, whether visual or aural, consisting of a speech, news event, news commentator, forum, panel discussion, or special event in which the element of time is of special significance, or any other program in which the element of time is of special significance and presentation of which would create, either intentionally or otherwise, the impression or belief on the part of the listening audience that the event or program being broadcast is in fact occurring simultaneously with the broadcast, shall be broadcast without an appropriate announcement being made either at the beginning or end of such reproduction or at the beginning or end of the program in which such reproduction is used that it is a mechanical reproduction or a mechanically reproduced program: *Provided, however,* That each such program of one minute or less need not be announced as such.

(b) The exact form of identifying announcement is not prescribed, but the language shall be clear and in terms commonly used and understood. Any other program mechanically reproduced or series of mechanical reproductions, including a mechanical reproduction used for background music, sound effects, station identification, program identification (theme music of short duration) or identification of sponsorship of the program proper, need not be announced as provided in paragraph (a) of this section, but the licensee shall not attempt affirmatively to create the impression that any program being broadcast by mechanical reproduction consists of live talent.

(c) The requirements of paragraph (a) of this section are waived with respect to network programs, transcribed and rebroadcast at a later hour because of the time zone differentials between the place where the program originates and where it is rebroadcast, this waiver being applicable whether the off-the-line recording is made by the network itself at one of its key stations or by an individual station, but only when the off-the-line recording is for broadcast at an hour not exceeding the time zone differential between the place where the program originates and where it is rebroadcast. Each station which broadcasts network programs at a later hour in accordance with this waiver shall make an appropriate announcement at least once each day between the hours of 10 a.m. and 10 p.m., stating that some or all of the network programs which are broadcast by that station are delayed broadcasts by means of transcription. This waiver provision also applies during the annual periods in which advanced time is effective with respect to network programs transcribed and rebroadcast 1 hour later because of the time differential resulting from the adoption or nonadoption of advanced time in some areas.

[28 F.R. 13660, Dec. 14, 1963, as amended at 33 F.R. 4413, Mar. 12, 1968]

§ 73.654 Sponsored programs, announcement of.

(a) When a television broadcast station transmits any matter for which money, services, or other valuable consideration is either directly or indirectly paid or promised to, or charged or received by, such station, the station shall broadcast an announcement that such matter is sponsored, paid for, or furnished, either in whole or in part, and by whom or on whose behalf such consideration was supplied: *Provided, however,* That "service or other valuable consideration" shall not include any service or property furnished without charge or at a nominal charge for use on, or in connection with, a broadcast unless it is so furnished in consideration for an identification in a broadcast of any person, product, service, trademark, or brand name beyond an identification which is reasonably related to the use of such service or property on the broadcast.

(b) The licensee of each television broadcast station shall exercise reasonable diligence to obtain from its employees, and from other persons with whom it deals directly in connection with any program matter for broadcast, information to enable such licensee to make the announcement required by this section.

(c) In any case where a report (concerning the providing or accepting of valuable consideration by any person for inclusion of any matter in a program intended for broadcasting) has been made to a television broadcast station, as required by section 508 of the Communications Act of 1934, as amended, of circumstances which would have required an announcement under this section had the consideration been received by such television broadcast station, an appropriate announcement shall be made by such station.

(d) In the case of any political program or any program involving the discussion of public controversial issues for which any films, records, transcriptions, talent, scripts, or other material or services of any kind are furnished, either directly or indirectly, to a station as an inducement to the broadcasting of such program, an announcement shall be made both at the beginning and conclusion of such program on which such material or services are used that such films, records, transcriptions, talent, scripts, or other material or services have been furnished to such station in connection with the broadcasting of such program: *Provided, however,* That only one such announcement need be made in the case of any such program of 5 minutes' duration or less, which announcement may be made either at the beginning or conclusion of the program.

(e) The announcements required by section 317(b) of the Communications Act of 1934, as amended, are waived with respect to feature motion picture films produced initially and primarily for theatre exhibition.

NOTE: The waiver heretofore granted by the Commission in its Report and Order of November 21, 1960 (FCC 60-1369; 25 FR 11224, Nov. 26, 1960), continues to apply to programs filmed or recorded on or before June 20, 1963.

(f) The announcement required by this section shall fully and fairly disclose the true identity of the person or persons by whom or in whose behalf such payment is made or promised, or from whom or in whose behalf such services or other valuable consideration is received, or by whom the material or services referred to in paragraph (d) of this section are furnished. Where an agent or other person contracts or otherwise makes arrangements with a station on behalf of another, and such fact is known to the station, the announcement shall disclose the identity of the person or persons in whose behalf such agent is acting instead of the name of such agent.

(g) In the case of any program, other than a program advertising commercial products or services, which is sponsored, paid for, or furnished, either in whole or in part, or for which material or services referred to in paragraph (d) of this section are furnished, by a corporation, committee, association, or other unincorporated group, the announcement required by this section shall disclose the name of such corporation, committee, association, or other unincorporated group. In each such case the station shall require that a list of the chief executive officers or members of the executive committee or of the board of directors of the corporation, committee, association, or other unincorporated group shall be made available for public inspection at the studios or general offices of one of the television broadcast stations carrying the program in each community in which the program is broadcast. Such lists shall be kept and made available for a period of 2 years.

(h) In the case of broadcast matter advertising commercial products or services, an announcement stating the sponsor's corporate or trade name, or the name of the sponsor's product, when it is clear that the mention of the name of the product constitutes a sponsorship identification, shall be deemed sufficient for the purposes of this section and only one such announcement need be made at any time during the course of the program.

(i) The announcements otherwise required by section 317 of the Communications Act of 1934, as amended, are waived with respect to the broadcast of "want ad" or classified advertisements sponsored by individuals. The waiver granted in this paragraph shall not extend to classified advertisements or want ads sponsored by any form of business enterprise, corporate or otherwise. Whenever sponsorship announcements are omitted pursuant to this paragraph the following conditions shall be observed:

(1) The licensee shall maintain a list showing the name, address, and (where available) the telephone number of each advertiser and shall attach this list to the program log for each day's operation; and

(2) Shall make this list available to members of the public who have a legitimate interest in obtaining the information contained in the list.

(j) Commission interpretations in connection with the provisions of this section may be found in the Commission's Public Notice entitled "Applicability of Sponsorship Identification Rules" (FCC 63-409; 28 F.R. 4732, May 10, 1963) and such supplements thereto as are issued from time to time.

(Sec. 317, 48 Stat. 1089, as amended; 47 U.S.C. 317) [28 F.R. 13660, Dec. 14, 1963, as amended at 32 F.R. 7916, June 1, 1967; 33 F.R. 15422, Oct. 17, 1968; 33 F.R. 18032, Dec. 4, 1968]

§ 73.655 Rebroadcast.

(a) The term "rebroadcast" as used in this section means reception by radio of the program of a television broadcast station, and the simultaneous or subsequent retransmission of such program by a broadcast station. The broadcasting of a program relayed by an auxiliary broadcast station licensed to the television broadcast station is not considered a rebroadcast. (As used in this section, program includes any complete program or part thereof.)

(b) Television broadcast stations may, without further authority from the Commission, rebroadcast programs originated by other U.S. television stations: *Provided*, That the Commission is notified in writing of the call letters of each station rebroadcast, together with certification that the originating station(s) has consented to the rebroadcast(s). However, the requirements of this paragraph do not apply to emergency rebroadcasting conducted pursuant to § 73.971 (b), which provides unrestricted AM/FM/TV rebroadcast privileges for stations utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan.

NOTE: The notice and certification of consent shall be given within 3 days of any single rebroadcast, but in case of the regular practice of rebroadcasting certain programs of a television broadcast station several times during a license period, notice and certification of consent shall be given for the ensuing license period with the application for renewal of license, or at the beginning of such rebroadcast practice if begun during a license period.

(c) No licensee of a television broadcast station shall rebroadcast the program of any United States radio station not designated in paragraph (b) of this section without written authority having first been obtained from the Commission upon application (informal) accompanied by written consent or certification of consent of the licensee of the station originating the program. The foregoing requirements concerning notification of call letters and certification of authority shall not apply to a station when rebroadcasting Defense Network (FM) programs. (Blanket authorizations for the rebroadcast of such programs have been filed with the Commission by all Defense Network (FM) stations.)

NOTE: By Order No. 82, dated and effective June 24, 1941, until further order of the Commission, § 73.655 (c) is suspended only insofar as it requires prior written authority of the Commission for the rebroadcasting of programs originated for that express purpose by U.S. Government radio stations.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325) [28 F.R. 13660, Dec. 14, 1963, as amended at 33 F.R. 7492, May 21, 1968]

§ 73.656 Lotteries.

(a) An application for construction permit, license, renewal of license, or any other authorization for the operation of a broadcast station, will not be granted where the applicant proposes to follow or continue to follow a policy or practice of broadcasting or permitting "the broadcasting of, any advertisement of or information concerning any lottery, gift enterprise, or similar scheme, offering prizes dependent in whole or in part upon lot or chance, or any list of the prizes drawn or awarded by means of any such lottery, gift enterprise, or scheme, whether said list contains any part or all of such prizes." (See 18 U. S. C. 1304.)

(b) The determination whether a particular program comes within the provisions of paragraph (a) of this section depends on the facts of each case. However, the Commission will in any event consider that a program comes within the provisions of paragraph (a) of this section if in connection with such program a prize consisting of money or thing of value is awarded to any person whose selection is dependent in whole or in part upon lot or chance, if as a condition of winning or competing for such prize, such winner or winners are required to furnish any money or thing of value or are required to have in their possession any product sold, manufactured, furnished or distributed by a sponsor of a program broadcast on the station in question.

(Sec. 1304, 62 Stat 763; 18 U.S.C. 1304)

§ 73.657 Broadcasts by candidates for public office.

(a) *Legally qualified candidate.* A "legally qualified candidate" means any person who has publicly announced that he is a candidate for nomination by a convention of a political party or for nomination or election in a primary, special, or general election, municipal, county, state or national, and who meets the qualifications prescribed by the applicable laws to hold the office for which he is a candidate, so that he may be voted for by the electorate directly or by means of delegates or electors, and who:

(1) Has qualified for a place on the ballot, or

(2) Is eligible under the applicable law to be voted for by sticker, by writing in his name on the ballot, or other method, and (i) has been duly nominated by a political party which is commonly known and regarded as such, or (ii) makes a substantial showing that he is a bona fide candidate for nomination or office.

(b) *General requirements.* No station licensee is required to permit the use of its facilities by any legally qualified candidate for public office, but if any licensee shall permit any such candidate to use its facilities, it shall afford equal opportunities to all other such candidates for that office to use such facilities: *Provided,* That such licensee shall have no power of censorship over the material broadcast by any such candidate.

(c) *Rates and practices.* (1) The rates, if any, charged all such candidates for the same office shall be uniform and shall not be rebated by any means direct or indirect. A candidate shall, in each case, be charged no more than the rate the station would charge if the candidate were a commercial advertiser whose advertising was directed to promoting its business within the same area as that encompassed by the particular office for which such person is a candidate. All discount privileges otherwise offered by a station to commercial advertisers shall be available upon equal terms to all candidates for public office.

(2) In making time available to candidates for public office no licensee shall make any discrimination between candidates in charges, practices, regulations, facilities, or services for or in connection with the service rendered pursuant to this part, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any licensee make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to broadcast to the exclusion of other legally qualified candidates for the same public office.

(d) *Inspection of records.* Every licensee shall keep and permit public inspection of a complete record of all requests for broadcast time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the licensee of such requests, and the charges made, if any, if request is granted. Such records shall be retained for a period of two years.

NOTE: See § 1.526 of this chapter.

(e) *Time of request.* A request for equal opportunities must be submitted to the licensee within 1 week of the day on which the first prior use, giving rise to the right to equal opportunities, occurred: *Provided, however,* That where a person was not a candidate at the time of such first prior use, he shall submit his request within 1 week of the first subsequent use after he has become a legally qualified candidate for the office in question.

(f) *Burden of proof.* A candidate requesting such equal opportunities of the licensee, or complaining of non-compliance to the Commission shall have the burden of proving that he and his opponent are legally qualified candidates for the same public office.

(Sec. 315, 48 Stat. 1088, as amended; 47 U.S.C. 315) [28 F.R. 13660, Dec. 14, 1963, as amended at 30 F.R. 4547, Apr. 8, 1965; 35 F.R. 7120, May 6, 1970]

§ 73.658 Affiliation agreements and network program practices.

(a) *Exclusive affiliation of station.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, broadcasting the programs of any other network organization. (The term "network organization" as used in this section includes national and regional network organizations. See ch. VII, J, of Report on Chain Broadcasting.)

(b) *Territorial exclusivity.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which prevents or hinders another broadcast station located in the same community from broadcasting the network's programs not taken by the former station, or which prevents or hinders another broadcast station located in a different community from broadcasting any program of the network organization. This section shall not be construed to prohibit any contract, arrangement, or understanding between a station and a network organization pursuant to which the station is granted the first call in its community upon the programs of the network organization. As employed in this paragraph, the term "community" is defined as the community specified in the instrument of authorization as the location of the station.

(c) *Term of affiliation.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which provides, by original terms, provisions for renewal, or otherwise for the affiliation of the station with the network organization for a period longer than 2 years: *Provided,* That a contract, arrangement, or understanding for a period up to 2 years may be entered into within 6 months prior to the commencement of such period.

(d) *Station commitment of broadcast time.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with any network organization, which provides for optioning of the station's time to the network organization, or which has the same restraining effect as time optioning. As used in this section, time optioning is any contract, arrangement, or understanding, express or implied, between a station and a network organization which prevents or hinders the station from scheduling programs before the network agrees to utilize the time during which such programs are scheduled, or which requires the station to clear time already scheduled when the network organization seeks to utilize the time.

(e) *Right to reject programs.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which, with respect to programs offered or already contracted for pursuant to an affiliation contract, prevents or hinders the station from (1) rejecting or refusing network programs which the station reasonably believes to be unsatisfactory or unsuitable or contrary to the public interest, or (2) substituting a program which, in the station's opinion, is of greater local or national importance.

(f) *Network ownership of stations.* No license shall be granted to a network organization, or to any person directly or indirectly controlled by or under common control of a network organization for a television broadcast station in any locality where the existing television broadcast stations are so few or of such unequal desirability (in terms of coverage, power, frequency, or other related matters) that competition would be substantially restrained by such licensing. (The word "control" as used in this section, is not limited to full control but includes such a measure of control as would substantially affect the availability of the station to other networks.)

(g) *Dual network operation.* No license shall be issued to a television broadcast station affiliated with a network organization which maintains more than one network of television broadcast stations: *Provided,* That this section shall not be applicable if such networks are not operated simultaneously, or if there is no substantial overlap in the territory served by the group of stations comprising each such network.

(h) *Control by networks of station rates.* No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, fixing or altering its rates for the sale of broadcast time for other than the network's programs.

(i) No license shall be granted to a television broadcast station which is represented for the sale of non-network time by a network organization or by an organization directly or indirectly controlled by or under common control with a network organization, if the station has any contract, arrangement or understanding, express or implied, which provides for the affiliation of the station with such network organization: *Provided, however,* That this rule shall not be applicable to stations licensed to a network organization or to a subsidiary of a network organization.

(j) *Network syndication and program practices.* (1) Except as provided in subparagraph (3) of this paragraph, no television network shall:

(i) After June 1, 1973, sell, license, or distribute television programs to television station licensees within the United States for nonnetwork television exhibition or otherwise engage in the business commonly known as "syndication" within the United States; or sell, license, or distribute television programs of which it is not the sole producer for exhibition outside the United States; or reserve any option or right to share in revenues or profits in connection with such domestic and/or foreign sale, license, or distribution; or

(ii) After August 1, 1972, acquire any financial or proprietary right or interest in the exhibition, distribution, or other commercial use of any television program produced wholly or in part by a person other than such television network, except the license or other exclusive right to network exhibition within the United States and on foreign stations regularly included within such television network: *Provided,* That if such network does not timely avail itself of such license or other exclusive right to network exhibition within the United States, the grantor of such license or right to network exhibition may, upon making a timely offer reasonably to compensate the network, reacquire such license or other exclusive right to exhibition of the program.

(2) Nothing contained in subparagraphs (1) and (2) of this paragraph shall prevent any television network from selling or distributing programs of which it is the sole producer for television exhibition outside the United States, or from selling or otherwise disposing of any program rights not acquired from another person, including the right to distribute programs for nonnetwork exhibition (as in syndication) within the United States as long as it does not itself engage in such distribution within the United States or retain the right to share the revenues or profits therefrom.

(3) Nothing contained in this paragraph shall be construed to include any television network formed for the purpose of producing, distributing, or syndicating program materials for educational, noncommercial, or public broadcasting exhibition or uses.

(4) For the purposes of this paragraph and paragraph (k) of this section the term network means any person, entity, or corporation which offers an interconnected program service on a regular basis for 15 or more hours per week to at least 25 affiliated television licensees in 10 or more States; and/or any person, entity, or corporation controlling, controlled by, or under common control with such person, entity, or corporation.

(k) *Prime time access rule.* (1) After October 1, 1971, no television stations, which there are three or more operating commercial television stations, shall broadcast network programs offered by any television network or networks for a total of more than 3 hours per day between the hours of 7 p.m. and 11 p.m. local time, except that in the central and mountain time zones the relevant period shall be between 6 p.m. and 10 p.m. local time.

(2) For the purpose of subparagraph (1) of this paragraph, network programs shall be defined to exclude special news programs dealing with fast-breaking news events, on-the-spot coverage of news events, and political broadcasts by legally qualified candidates for public office.

NOTE: See also footnote 35, Report and Order, 35 F.R. 7422, for application of this paragraph to certain sports events.

(3) The portion of the time from which network programing is excluded by subparagraph (1) of this paragraph may not after October 1, 1972, be filled with off-network programs; or feature films which within 2 years prior to the date of broadcast have been previously broadcast by a station in the market.

(4) The top 50 markets shall be determined on an annual basis as of September 1 according to the most recent

American Research Bureau prime time market rankings (all home stations combined) throughout the United States.

(5) Nothing in this paragraph shall be construed to apply to educational, noncommercial, or public broadcasting station licensees in their use and exhibition of program materials supplied through one or more noncommercial, educational, or public broadcasting television network systems.

NOTE: See 36 F.R. 12622 for a waiver of this rule with regard to network news programs.

NOTE: For stations in the mountain time zone, network programs broadcast in excess of 3 hours during prime time in any evening shall not be counted, where: (1) The program is a sports event or other program broadcast simultaneously on the network throughout the 48 conterminous States; and (2) the station broadcasts no other network material (including "pre-game shows") during prime time the same evening.

(l) *Broadcast of the programs of more than one network.* The provisions of this paragraph govern and limit the extent to which, after October 1, 1971, commercial television stations in the 50 States of the United States, which are regular affiliates of one of the three national television networks, may broadcast programs of another network, in markets where there are two such affiliated stations and one or more operational VHF or UHF stations having reasonably comparable facilities which are not regular affiliates of any network. Whether or not the stations in a particular market come within the provisions of this paragraph is determined by whether, as of July 1 of each year with respect to programs beginning October 1, or as of January 1 of each year with respect to programs beginning April 1, there are in the market the stations specified in the last sentence.

(1) *Definitions.* As used in this paragraph, the following terms have the meanings given:

(i) "Station" means a commercial television station in the 50 States of the United States.

(ii) "Operational station" means a station authorized and operating as of June 10 (with respect to programs beginning October 1) or as of December 10 (with respect to programs beginning April 1), or a station authorized and which gives notice to the Commission by such June 10 or December 10 date that it will be on the air by such October 1 or April 1 date (including request for program test authority if none has previously been given), and commits itself to remain on the air for 6 months after such October 1 or April 1 date. Such notice shall be received at the Commission by the June 10 or December 10 date mentioned, and shall show that copies thereof have been sent to the three national networks and to the licensees of all operating television stations in the market.

(iii) "Affiliated station" means a station having a regular affiliation with one of the three national television networks, under which it serves as that network's primary outlet for the presentation of its programs in a market. It includes any arrangement under which the network looks primarily to this station rather than other stations for the presentation of its programs and the station chiefly presents the programs of this network rather than another network.

(iv) "Unaffiliated station" means a station not having an affiliation arrangement as defined in this subparagraph with a national television network, even though it may have other types of agreements or per-program arrangements with it.

(v) "Network" means a national organization distributing programs for a substantial part of each broadcast day to television stations in all parts of the United States, generally via interconnection facilities.

(vi) "Unaffiliated network" means a network not having an affiliated station (as defined in this paragraph) in a particular market, even though it may have other types of agreements or per-program arrangements.

(vii) "Market" means the television markets of the United States, and the stations in them, as identified in the latest publication of American Research Bureau (ARB), together with any stations which have since become operational in the same communities.

(viii) "Evening programing" means programing (regular programs or "specials") starting and concluding on a network between the hours of 7:30 p.m. and 11 p.m. local time (except 6:30 p.m. and 10 p.m. in the Central time zone), plus all programs other than regular newscasts starting on the network between 7 and 7:30 p.m. local time (6 and 6:30 p.m. local time in the Central time zone). It does not include portions broadcast after

7 p.m. of programs starting earlier, or portions broadcast after 11 p.m. of programs starting earlier.

(ix) "Specials" means programs not carried on the network at least as often as once a week. It includes both programs scheduled well in advance and those scheduled very shortly before broadcast on the network.

(x) "Reasonably comparable facilities" means station transmitting facilities (effective radiated power and effective antenna height above average terrain) such that the station's Grade B coverage area is at least two-thirds as large (in square miles) as the smallest of the market affiliated stations' Grade B coverage areas. Where one or both of the affiliates is licensed to a city different from that of the unaffiliated station, the term "reasonably comparable facilities" also includes the requirement that the unaffiliated station must put a predicted Grade A or better signal over all of the city of license of the other regular (nonsatellite) station(s), except that where one of the affiliated stations is licensed to the same city as the unaffiliated station, and puts a Grade B but not a Grade A signal over the other city of license, the unaffiliated station will be considered as having reasonably comparable facilities if it too puts a predicted Grade B signal over all of the other city of license.

(2) *Taking programs from unaffiliated networks.* No affiliated station, in a market covered by this paragraph, shall take and broadcast, from an unaffiliated network, any programing of the times and types specified in this subparagraph, unless the conditions specified have first been met:

(i) Any evening programing (as defined in this paragraph), unless and until the entire schedule of such programs has been offered by the unaffiliated network to the unaffiliated station as provided in subparagraph (4) of this paragraph, and the unaffiliated station has either accepted 15 hours per week of such programs, plus additional "special" hours when part of the "special" is included in the 15 hours, or has accepted a lesser amount and indicated that it does not wish to carry any more. Such acceptance shall be governed by the provisions of subparagraph (4) of this paragraph.

(ii) Any programing beginning on the network between 12 noon and 7 p.m. on Saturdays, Sundays, and holidays, and consisting of sports events (including, without limitation, college football and basketball, professional football, baseball, ice hockey, golf, tennis, horseracing and autoracing), unless and until the program has first been offered to the unaffiliated station and that station has indicated that it does not wish to accept it.

(iii) Any programing broadcast after 11 p.m. local time (except 10 p.m. local time in the Central time zone) which is a continuation of programs starting earlier and carried by the unaffiliated station; or any material broadcast after 7 p.m. (6 p.m. in the central time zone) which is a continuation of sports programs beginning earlier and carried by the unaffiliated station.

(iv) Any program presented in the same week by the unaffiliated station.

(3) *Carriage of programs of a network which has an affiliate.* No affiliated station in a market covered by this paragraph shall broadcast, from another network which has an affiliated station in the market, any evening programing or Saturday, Sunday, or holiday sports programing, unless such programing has first been offered to the unaffiliated station in the market and the latter has indicated that it does not wish to carry it.

(4) *Offer and acceptance.* (i) The "offer" by a network referred to in this paragraph means an offer to the unaffiliated station of the programs for broadcast. Programs so offered cannot be withdrawn by the network until the following April 1 or October 1, unless the station does not in fact broadcast the program as accepted, in which case the provisions of subdivision (ii) of this subparagraph shall apply, or unless the program is canceled on the network, in which case the replacement or substitute program shall be offered to the station as a new program under subparagraphs (2) or (3) of this paragraph. If a program accepted by the unaffiliated station is shifted in time, the station may exercise its right of "first call" either with respect to the program at its new time, or the previous time segment, at its option.

(ii) The acceptance referred to in subparagraphs (2) and (3) of this paragraph means that the unaffiliated station agrees to broadcast the program accepted, at its live network time or a delayed time acceptable to the network, unless in its judgment the program is not in the public interest or it wishes to substitute a local, or other live, program for it. The provisions of paragraph (a) of this section, prohibiting agreements which hinder the presentation of the programs of other networks, shall not apply to material covered by this paragraph. If a program is not presented in a particular week live or at a delayed time acceptable to the network, the network may place this particular broadcast of the program on another station; and if this occurs more than 4 times in any 13-week period the network may withdraw the program from the station without obligation to offer it any additional programing. The unaffiliated station is free to seek and obtain other terms of acceptance from the network; but the offer of programing by the network on the foregoing terms satisfies its obligations under this paragraph.

(iii) The offer by the network shall, to the extent possible, be up to and including Aug. 2, 1971 with respect to programs beginning in the fall season, and by January 15 with respect to programs presented after April 1, or otherwise as soon as possible. The unaffiliated station's acceptance or indication of nonacceptance shall be within 2 weeks after the date of the offer; where any negotiations between the network and the station concerning particular programs are involved, programs not accepted within 30 days of the date of the offer shall be deemed not accepted.

NOTE 1: If there are in a particular market two affiliated stations and two (or more) operational unaffiliated stations with reasonably comparable facilities, the provisions of this paragraph (l) shall require an offer of programing to each; but the 15-hour-per-week "first call" provision applies to the total programing taken by all such stations.

NOTE 2: The provisions of this paragraph (l) do not apply to a market in which there are two VHF affiliated U.S. stations, and a foreign VHF station to which a national U.S. television network transmits programs pursuant to authority granted under section 325 of the Communications Act of 1934, as amended, and which serves as that network's primary affiliate in the market.

[28 F.R. 13660, Dec. 14, 1963, as amended at 35 F.R. 7425, May 13, 1970; 35 F.R. 13650, Aug. 27, 1970; 36 F.R. 6517, Apr. 6, 1971; 36 F.R. 7741, Apr. 24, 1971; 36 F.R. 13926, July 28, 1971; 36 F.R. 14648, Aug. 7, 1971; 37 F.R. 11863, July 12, 1972; 37 F.R. 13625, July 15, 1972]

§ 73.659 Special rules relating to contracts providing for reservation of time upon sale of a station.

No license, renewal of license, assignment of license, or transfer of control of a corporate licensee shall be granted or authorized to a television broadcast station which has a contract, arrangement or understanding, express or implied, pursuant to which, as consideration or partial consideration for the assignment of license or transfer of control, the assignor of a station license or the transferor of stock, where transfer of a corporate licensee is involved, or the nominee of such assignor or transferor retains any right of reversion of the license or any right to the reassignment of the license in the future, or reserves the right to use the facilities of the station for any period whatsoever.

§ 73.660 Station license, posting of.

The original of each station license shall be posted in the transmitter room.

§ 73.661 Operator requirements.

One or more operators holding a valid radiotelephone first-class operator license shall be on duty at the place where the transmitting apparatus is located or at a remote control point established pursuant to the provisions of § 73.676, and in actual charge thereof whenever the transmitter is delivering power to the transmitting antenna. The original license (or FCC Form 759) of each station operator shall be posted at the place where he is on duty. The licensed operator on duty and in charge of television broadcast transmitter may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of license which he holds and the rules and regulations governing such other stations. However, such other duties shall in nowise impair or impede the required supervision of the television broadcast transmitter. If operation by remote control has not been authorized, the transmitter shall be readily accessible and clearly visible to the operator at his normal operating position. If operation by remote control is authorized, the control and monitoring equipment shall be readily accessible and clearly visible to the operator at his normal operating position.

[30 F.R. 6520, May 12, 1965]

§ 73.662 Antenna structure, marking and lighting.

The provisions of Part 17 of this chapter (Construction, Marking, and Lighting of Antenna Structures) require that certain antenna structures be painted and/or lighted in accordance with the provisions of that part. Where the antenna structure of a facility authorized under this subpart is required to be painted or lighted, see §§ 17.47 through 17.53 of this chapter.

[33 F.R. 15423, Oct. 17, 1968]

§ 73.664 Broadcast of telephone conversations.

See § 73.1206 which is applicable to all television broadcast stations.

[35 F.R. 7733, May 20, 1970]

§ 73.665 Station inspection.

The licensee of a television broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 73.666 Experimental operation.

Television broadcast stations may (upon informal application) conduct technical experimentation directed to the improvement of technical phases of operation and for such purposes may utilize a signal other than the standard television signal subject to the following conditions:

(a) That the licensee complies with the provisions of § 73.651 with regard to the minimum number of hours of transmission with a standard television signal.

(b) That no transmissions are radiated outside of the authorized channel and subject to the condition that no interference is caused to the transmissions of a standard television signal by other television broadcast stations.

(c) No charges either direct or indirect shall be made by the licensee of a television broadcast station for the production or transmission of programs when conducting technical experimentation.

§ 73.667 Discontinuance of operation.

The licensee of each station shall notify the Commission in Washington, D.C., and the Engineer in Charge of the radio district where such station is located of permanent discontinuance of operation at least two days before operation is discontinued. The licensee shall, in addition, immediately forward the station license and other instruments of authorization to the Washington, D.C., office of the Commission for cancellation.

§ 73.668 Frequency tolerance.

(a) The carrier frequency of the visual transmitter shall be maintained within ±1000 cycles of the authorized carrier frequency.

(b) The center frequency of the aural transmitter shall be maintained 4.5 megacycles, ±1000 cycles, above the visual carrier frequency.

§ 73.669 General requirements relating to logs.

(a) The licensee or permittee of each television broadcast station shall maintain program, operating and maintenance logs as set forth in §§ 73.670, 73.671, and 73.672. Each log shall be kept by the station employee or employees competent to do so, having actual knowledge of the facts required, who in the case of program and operating logs shall sign the appropriate log when starting duty, and again when going off duty.

(b) The logs shall be kept in an orderly and legible manner, in suitable form, and in such detail that the data required for the particular class of station concerned is readily available. Key letters or abbreviations may be used if proper meaning or explanation is contained elsewhere in the log. Each sheet shall be numbered and dated. Time entries shall be made in local time.

(c) No log or preprinted log or schedule which upon completion becomes a log or portion thereof shall be erased, obliterated, or willfully destroyed within the period of retention provided by the provisions of this part. Any necessary correction shall be made only pursuant to §§ 73.670, 73.671, and 73.672, and only by striking out the erroneous portion, or by making a corrective explanation on the log or attachment to it as provided in those sections.

(d) Entries shall be made in the log as required by §§ 73.670, 73.671, and 73.672. Additional information such as that needed for billing purposes or for the cuing of automatic equipment may be entered on the logs. Such additional information, so entered, shall not be subject to the restrictions and limitations in the Commission's rules on the making of corrections and changes in logs.

[28 F.R. 13660, Dec. 14, 1963, as amended at 31 F.R. 752, Jan. 20, 1966; 33 F.R. 4413, Mar. 12, 1968; 33 F.R. 15423, Oct. 17, 1968]

§ 73.670 Program log.

(a) The following entries shall be made in the program log:

(1) *For each program.* (i) An entry identifying the program by name or title.

(ii) An entry of the time each program begins and ends. If programs are broadcast during which separately identifiable program units of a different type or source are presented, and if the licensee wishes to count such units separately, the beginning and ending time for the longer program need be entered only once for the entire program. The program units which the licensee wishes to count separately shall then be entered underneath the entry for a longer program, with the beginning and ending time of each such unit, and with the entry indented or otherwise distinguished so as to make it clear that the program unit referred to was broadcast within the longer program.

(iii) An entry classifying each program as to type, using the definitions set forth in Note 1 at the end of this section.

(iv) An entry classifying each program as to source, using the definitions set forth in Note 2 at the end of this section. (For network programs, also give name or initials of network, e.g., ABC, CBS, NBC.)

(v) An entry for each program presenting a political candidate, showing the name and political affiliation of such candidate.

(2) *For commercial matter.* (i) An entry identifying (*a*) the sponsor(s) of the program; (*b*) the person(s) who paid for the announcement, or (*c*) the person(s) who furnished materials or services referred to in § 73.654(d). If the title of a sponsored program includes the name of the sponsor, e.g., XYZ News, a separate entry for the sponsor is not required. See Note 3 at the end of this section for definition of commercial matter.

(ii) An entry or entries showing the total duration of commercial matter in each hourly time segment (beginning on the hour) or the duration of each commercial message (commercial continuity in sponsored programs, or commercial announcement) in each hour. See Note 5 at the end of this section for statement as to computation of commercial time.

(iii) An entry showing that the appropriate announcement(s) (sponsorship, furnishing material or services, etc.) have been made as required by section 317 of the Communications Act and § 73.654. A check mark (✓) will suffice but shall be made in such a way as to indicate the matter to which it relates.

(3) *For public service announcements.* (i) An entry showing that a public service announcement (PSA) has been broadcast together with the name of the organization or interest on whose behalf it is made. See Note 4 at the end of this section for definition of a public service announcement.

(4) *For other announcements.* (i) An entry of the time that each required station identification announcement is made (call letters and licensed location; see § 73.652).

(ii) An entry for each announcement presenting a political candidate, showing the name and political affiliation of such candidate.

(iii) An entry for each announcement made pursuant to the local notice requirements of §§ 1.580 (pregrant) and 1.594 (designation for hearing) of this chapter, showing the time it was broadcast.

(iv) An entry showing that a mechanical reproduction announcement has been made in accordance with the provisions of § 73.653.

(b) Program log entries may be made either at the time of or prior to broadcast. A station broadcasting the programs of a national network which will supply it with all information as to such programs, commercial matter and other announcements for the composite week need not log such data but shall record in its log the time when it joined the network, the name of each network program broadcast, the time it leaves the network, and any nonnetwork matter broadcast required to be logged. The information supplied by the network, for the composite week which the station will use in its renewal application, shall be retained with the program logs and associated with the log pages to which it relates.

(c) No provision of this section shall be construed as prohibiting the recording or other automatic maintenance of data required for program logs. However, where such automatic logging is used, the licensee must comply with the following requirements:

(1) The licensee, whether employing manual or automatic logging or a combination thereof, must be able accu-

rately to furnish the Commission with all information required to be logged;

(2) Each recording, tape, or other means employed shall be accompanied by a certificate of the operator or other responsible person on duty at the time or other duly authorized agent of the licensee, to the effect that it accurately reflects what was actually broadcast. Any information required to be logged which cannot be incorporated in the automatic process shall be maintained in a separate record which shall be similarly authenticated;

(3) The licensee shall extract any required information from the recording for the days specified by the Commission or its duly authorized representative and submit it in written log form, together with the underlying recording, tape, or other means employed.

(d) Program logs shall be changed or corrected only in the manner prescribed in § 73.669(c) and only in accordance with the following:

(1) *Manually kept log.* Where, in any program log, or preprinted program log, or program schedule which upon completion is used as a program log, a correction is made before the person keeping the log has signed the log upon going off duty, such correction no matter by whom made, shall be initialed by the person keeping the log prior to his signing of the log when going off duty, as attesting to the fact that the log as corrected is an accurate representation of what was broadcast. If correction or additions are made on the log after it has been so signed, explanation must be made on the log or an attachment to it, dated and signed by either the person who kept the log, the station program director or manager, or an officer of the licensee.

NOTE 1. *Program type definitions.* The definitions of the first eight types of programs (a) through (h) are intended not to overlap each other and will normally include all the various programs broadcast. Definitions (i) through (k) are subcategories and the programs classified thereunder will also be classified under one of the appropriate first eight types. There may also be further duplication within types (i) through (k); (e.g., a program presenting a candidate for public office, prepared by an educational institution, would be classified as Public Affairs (PA), Political (POL), and Educational Institution (ED)).

(a) *Agricultural programs* (A) include market reports, farming, or other information specifically addressed, or primarily of interest, to the agricultural population.

(b) *Entertainment programs* (E) include all programs intended primarily as entertainment, such as music, drama, variety, comedy, quiz, etc.

(c) *News programs* (N) include reports dealing with current local, national, and international events, including weather and stock market reports; and when an integral part of a news program, commentary, analysis, and sports news.

(d) *Public affairs programs* (PA) include talks, commentaries, discussions, speeches, editorials, political programs, documentaries, forums, panels, round tables, and similar programs primarily concerning local, national, and international public affairs.

(e) *Religious programs* (R) include sermons or devotionals; religious news; and music, drama, and other types of programs designed primarily for religious purposes.

(f) *Instructional programs* (I) include programs (other than those classified under Agricultural, News, Public Affairs, Religious or Sports) involving the discussion of, or primarily designed to further an appreciation or understanding of, literature, music, fine arts, history, geography, and the natural and social sciences; and programs devoted to occupational and vocational instruction, instruction with respect to hobbies, and similar programs intended primarily to instruct.

(g) *Sports programs* (S) include play-by-play and pre- or post-game related activities and separate programs of sports instruction, news or information (e.g., fishing opportunities, golfing instructions, etc.).

(h) *Other programs* (O) include all programs not falling within definitions (a) through (g).

(i) *Editorials* (EDIT) include programs presented for the purpose of stating opinions of the licensee.

(j) *Political programs* (POL) include those which present candidates for public office or which give expressions (other than in station editorials) to views on such candidates or on issues subject to public ballot.

(k) *Educational Institution programs* (ED) include any program prepared by, in behalf of, or in cooperation with, educational institutions, educational organizations, libraries, museums, PTA's or similar organizations. Sports programs shall not be included.

NOTE 2. *Program source definitions.* (a) *A local program* (L) is any program originated or produced by the station, or for the production of which the station is substantially responsible, and employing live talent more than 50 percent of the time. Such a program, taped, recorded, or filmed for later broadcast shall be classified by the station as local. A local program fed to a network shall be classified by the originating station as local. All nonnetwork news programs may be classified as local. Programs primarily featuring syndicated or feature films or other nonlocally recorded programs shall be classified as "Recorded" (REC) even though a station personality appears in connection with such material. However, identifiable units of such programs which are live and separately logged as such may be classified as local (e.g., if during the course of a feature film program, a nonnetwork 2-minute news report is given and logged as a news program, the report may be classified as local).

(b) *A network program* (NET) is any program furnished to the station by a network (national, regional, or special). Delayed broadcasts of programs originated by networks are classified as network.

(c) *A recorded program* (REC) is any program not defined in (a), (b), (c) above, including without limitation, syndicated programs, taped or transcribed programs, and feature films.

NOTE 3. *Definition of commercial matter* (CM) includes commercial continuity (network and nonnetwork) and commercial announcements (network and nonnetwork) as follows: (Distinction between continuity and announcements is made only for definition purposes. There is no need to distinguish between the two types of commercial matters when logging.)

(a) *Commercial continuity* (CC) is the advertising message of a program sponsor.

(b) A commercial announcement (CA) is any other advertising message for which a charge is made or other consideration is received.

(1) Included are (i) "bonus spots"; (ii) trade-out spots, and (iii) promotional announcements of a future program where consideration is received for such an announcement or where such announcement identifies the sponsor of a future program beyond mention of the sponsor's name as an integral part of the title of the program. (E.g., where the agreement for the sale of time provides that the sponsor will receive promotional announcements, or when the promotional announcement contains a statement such as "LISTEN TOMORROW FOR THE—[NAME OF PROGRAM]—BROUGHT TO YOU BY—[SPONSOR'S NAME]—.")

(2) Other announcements including but not limited to the following are not commercial announcements:

(i) Promotional announcements, except as heretofore defined in paragraph (b) of this Note.

(ii) Station identification announcements for which no charge is made.

(iii) Mechanical reproduction announcements.

(iv) Public service announcements.

(v) Announcements made pursuant to § 73.654(d) that materials or services have been furnished as an inducement to broadcast a political program or a program involving the discussion of controversial public issues.

(vi) Announcements made pursuant to the local notice requirements of §§ 1.580 (pregrant) and 1.594 (designation for hearing) of this chapter.

NOTE 4. *Definition of a public service announcement.* A public service announcement is an announcement for which no charge is made and which promotes programs, activities, or services of Federal, State or local Governments (e.g., recruiting, sales of bonds, etc.) or the programs, activities or services of nonprofit organizations (e.g., UGF, Red Cross Blood Donations, etc.), and other announcements regarded as serving community interests, excluding time signals, routine weather announcements and promotional announcements.

NOTE 5. *Computation of commercial time.* Duration of commercial matter shall be as close an approximation to the time consumed as possible. The amount of commercial time scheduled will usually be sufficient. It is not necessary, for example, to correct an entry of a 1-minute commercial to accommodate varying reading speeds even though the actual time consumed might be a few seconds more or less than the scheduled time. However, it is incumbent upon the licensee to ensure that the entry represents as close an approximation of the time actually consumed as possible.

[31 F.R. 13238, Oct. 13, 1966, as amended at 33 F.R. 4741, Mar. 20, 1968]

§ 73.671 Operating log.

(a) The following entries shall be made in the operating log by the properly licensed operator in actual charge of the transmitting apparatus only.

(1) An entry of the time the station begins to supply power to the antenna and the time it stops.

(2) An entry of each interruption of the carrier wave, where restoration is not automatic, its cause and duration followed by the signature of the person restoring operation (if licensed operator other than the licensed operator on duty).

(3) An entry, at the beginning of operation and at intervals not exceeding one-half hour, of the following (actual readings observed prior to making any adjustments to the equipment) and, when appropriate, an indication of corrections made to restore parameters to normal operating values:

(i) Operating constants of last radio stage of aural transmitter (total plate voltage and plate current).

(ii) Transmission line meter readings for both transmitters.

(iii) For remote control operation, the results of observations of vertical interval test signal transmissions (see § 73.676(f)).

(4) Any other entries required by the instrument of authorization or the provisions of this part.

(5) The entries required by § 17.49 (a), (b) and (c) of this chapter con-

cerning daily observations of tower lights.

(b) Automatic devices accurately calibrated and with appropriate time, date and circuit functions may be utilized to record the entries in the operating log: *Provided*, That:

(1) They do not affect the operation of circuits or accuracy of indicating instruments of the equipment being recorded;

(2) The recording devices have an accuracy equivalent to the accuracy of the indicating instruments;

(3) The calibration is checked against the original indicators at least once a week and the results noted in the maintenance log;

(4) Provision is made to actuate automatically an aural alarm circuit located near the operator on duty if any of the automatic log readings are not within the tolerances or other requirements specified in the rules or instrument of authorization;

(5) Unless the alarm circuit operates continuously, devices which record each parameter in sequence must read each parameter at least once during each 10-minute period and clearly indicate the parameter being recorded;

(6) The automatic logging equipment is located in the near vicinity of the operator on duty and is inspected by him periodically during the broadcast day; and

(7) The indicating equipment conforms to the requirements of § 73.681 except that the scales need not exceed 2 inches in length. Arbitrary scales may not be used.

(c) In preparing the operating log, original data may be recorded in rough form and later transcribed into the log, but in such a case all portions of the original memoranda shall be preserved as a part of the complete log.

(d) Operating logs shall be changed or corrected only in the manner prescribed in § 73.669(c) and only in accordance with the following:

(1) *Manually kept log*. Any necessary corrections in a manually kept operating log shall be made only by the person making the original entry who shall make and initial each correction prior to signing the log when going off duty in accordance with § 73.669(a). If corrections or additions are made in the operating log after it has been so signed explanation must be made on the log or on an attachment to it, dated and signed by either the person who kept the log or the station technical supervisor or an officer of the licensee.

(2) *Automatic logging*. No automatically kept operating log shall be altered in any way after entries have been recorded. Any errors or omissions found in an automatically kept operating log shall be noted and explained in a memorandum signed by the operator on duty (who, under the provisions of paragraph (b)(7) of this section, is required to inspect the automatic equipment) or, by the station technical supervisor or an officer of the licensee. Such memorandum shall be affixed to the original log in question.

[28 F.R. 13660, Dec. 14, 1963, as amended at 31 F.R. 753, Jan. 20, 1966; 33 F.R. 19821, Dec. 27 1968; 36 F.R. 17429, Aug. 3, 1971]

§ 73.672 Maintenance log.

(a) The following entries shall be made in the maintenance log:

(1) An entry each week of the time and result of test of auxiliary transmitters.

(2) A notation each week of the calibration check of automatic recording devices as required by § 73.671(b)(3).

(3) An entry describing the method used and the results obtained in determining the operating frequency of the transmitter:

(i) Whenever the frequency check required by § 73.690(a) is made.

(ii) Whenever the frequency measurement required by § 73.690(c) is made.

(4) An entry of the date and time of removal from and restoration to service of any of the following equipment in the event it becomes defective:

(i) Visual modulation monitoring equipment or aural modulation monitor.

(ii) Final stage plate voltmeters of aural and visual transmitters.

(iii) Final stage plate ammeters of aural and visual transmitters.

(iv) Visual and aural transmitter transmission line radio frequency voltage, current, or power meter.

(5) The entries required by § 17.49(d) of this chapter concerning quarterly inspections of the condition of tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(6) Entries shall be made so as to describe fully any operation for testing and maintenance purposes.

(7) Whenever the calibration of the output power meter is made as required by § 73.689(b) (1) and (2) with a brief description of the method and results.

(8) Any other entries required by the instrument of authorization or the provisions of this part.

(b) The inspecting operator shall sign and date the maintenance log at the conclusion of each inspection. In preparing the maintenance log, original data may be recorded in rough form and later transcribed into the log, but in such cases all portions of the original memorandum shall be preserved as a part of the complete log.

(c) Any necessary corrections in the maintenance log shall be made only by the inspecting operator who shall initial and date all changes prior to signing the log. If corrections or additions are made on the maintenance log after the log has been so signed, explanation must be made the subject of a separate memorandum, dated and signed by the operator who made the entry in question or the station technical supervisor or by an officer of the licensee. Such memorandum shall explain fully the circumstances surrounding the errors or ambiguities, and shall be affixed to the original log in question. If written and signed by other than the inspecting operator who made the entry the memorandum shall contain a satisfactory explanation of why such signature is lacking.

[31 F.R. 753, Jan. 1, 1966, as amended at 33 F.R. 19821, Dec. 27, 1968; 34 F.R. 2049, Feb. 12, 1969]

§ 73.673 Retention of logs.

Logs of television broadcast stations shall be retained by the licensee or permittee for a period of 2 years: *Provided, however,* That logs involving communications incident to a disaster or which include communications incident to or involved in an investigation by the Commission and concerning which the licensee or permittee has been notified, shall be retained by the licensee or permittee until he is specifically authorized in writing by the Commission to destroy them: *Provided, further,* That logs incident to or involved in any claim or complaint of which the licensee or permittee has notice shall be retained by the licensee or permittee until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for the filing of suits upon such claims.

§ 73.674 Availability of logs and records.

The program, operating, and maintenance logs shall be made available upon request by an authorized representative of the Commission.

§ 73.675 Operation during emergency.

(a) When necessary to the safety of life and property and in response to dangerous conditions of a general nature, television broadcast stations may, at the discretion of the licensee and without further Commission authority, transmit emergency weather warnings and other emergency information. Examples of emergency situations which may warrant either an immediate or delayed response by the licensee are: Tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, discharge of toxic gases, widespread power failures, industrial explosions, and civil disorders. Transmission of information concerning school closings and changes in schoolbus schedules resulting from any of these conditions, is appropriate. In addition, and if requested by responsible public officials, emergency point-to-point messages may be transmitted for the purpose of requesting or dispatching aid and assisting in rescue operations.

(b) When emergency operation is conducted utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan as provided in § 73.971, the attention signal described in § 73.906 may be employed.

(c) Emergency operation shall be confined to the hours, frequencies, powers, and modes of operation specified in the license documents of the stations concerned.

(d) Any emergency operation undertaken in accordance with this section may be terminated by the Commission, if required in the public interest.

(e) Immediately upon cessation of an emergency during which broadcast facilities were used for the transmission of point-to-point messages under paragraph (a) of this section, a report in letter form shall be forwarded to the Commission and the Engineer in Charge of the radio district in which the station is located, setting forth the nature of the emergency, the dates and hours of emergency operation, and a brief description of the material carried during the emergency period.

(f) If an Emergency Action Condition is declared while emergency operation under this section is in progress, the Emergency Action Notification shall take precedence.

[33 F.R. 7492, May 21, 1968]

§ 73.676 Remote control operation.

(a) Television broadcast stations authorized to operate by remote control shall provide, as a minimum, the following telemetry, control, and test functions at the control point:

(1) Means for turning the transmitter on and off at will.

(2) Suitable instruments for indicating the operating parameters which are required by § 73.671 to be entered in the operating log. The indicating instruments shall show the actual values of such parameters, or decimal multiples of those parameters with no less accuracy than that specified in § 73.688 for the indicating instruments employed at the transmitter. Any decimal multipliers applicable must be set forth in a tabulation posted at the operating position if manual logging is employed; on an automatically printed log the tabulation must be imprinted at least once for each calendar day. These requirements do not apply to instruments which show the values of operating parameters (e.g., grid drive, plate current and voltage of intermediate stages) which the rules do not require be logged, and instruments that indicate the condition of obstruction lighting.

(3) A sufficient number of control circuits to perform all transmitter adjustments normally required on a daily basis to insure strict compliance with the technical requirements of the rules.

(4) Apparatus designed to use the signal radiated from the antenna, or fed from the antenna circuit by a coaxial link, and suitable for continuously and accurately monitoring the waveform and other characteristics of the transmitted visual signal including the percentage of modulation of the signal (a vectorscope or other instrument designed to depict the instantaneous phase and amplitude relationships of color components shall be provided, if any portion of the transmissions are in color). The apparatus shall be capable of providing both full field displays, and displays of test signals inserted on selected lines in the vertical blanking interval (See § 73.682 (a)(22)); appropriate switching shall be provided so that either mode of presentation can be selected by the operator.

(5) A type approved aural modulation monitor, equipped, where necessary, with a properly designed signal frequency amplifier, which utilizes the signal radiated from the antenna, or obtained from the antenna circuit by a coaxial link, and is capable of continuously and accurately indicating the peak and quasi-peak percentages of modulation of the aural signal.

(6) Suitable instruments for generating special signals for the testing and adjustment of the entire transmission system from studio to antenna and the calibration of monitoring equipment, in accordance with paragraphs (f) and (g) of this section.

(7) Means for determining that any required obstruction lighting of the antenna and supporting tower is functioning properly.

(8) All stations, whether operating by remote control or direct control, shall be so equipped as to be able to follow the Emergency Action Notification procedures described in § 73.932.

(b) The control point shall be under the immediate supervision and control of one or more operators meeting the requirements of § 73.661 at all times when the station is operating by remote control. Such operators may perform other tasks which do not require absence from the remote control position, and do not otherwise impair necessary supervision of the TV transmitter.

(c) The control circuits from the control point to the transmitter and the return telemetry circuit shall be so designed and installed that open circuits, short circuits, accidental grounding or other line faults, where wire lines are used, or equipment failures, casual signals or random noise impulses, if other means are used, will not activate the transmitter. Any fault or failure which results in loss of control must cause the transmitter to cease operation. The loss of any telemetry function which provides information necessary to comply with the logging requirements of § 73.671 shall result in the actuation of automatic circuitry which, not more than 1 hour from the time of telemetry failure, will terminate operation of the transmitter.

(d) The equipment at the control point and at the transmitter shall be so installed and protected as not to be accessible to or capable of being operated by persons other than those duly authorized to do so by the licensee.

(e) The waveform monitor at the remote control point shall be calibrated against a waveform monitor maintained at the transmitter during each inspection required by paragraph (g) of this section. Any calibration data found necessary to permit accurate interpretation of the indications of the remote monitor shall be posted at the remote control point in a position adjacent to the monitor.

(f) Test signals shall be generated and inserted in the vertical interval of the visual signal at the remote control point, and shall be observed at the remote control point after extraction from the radio frequency signal at the output of the transmitter. Normally, the radiated signal is utilized after off-the-air reception, but the signal may be obtained by coupling to the output circuit of the transmitter at the point where the radio frequency signal enters the antenna transmission line.

(1) The required test signals, and the place of insertion in the vertical interval shall be as follows:

(i) Multiburst, on field 1, line 18 (see Figure 13 of § 73.699).

(ii) Color bars, on field 2, line 18 (see Figure 14 of § 73.699). During monochrome transmission chrominance information shall not be included in this test signal.

(iii) Composite signal, on field 1, line 19 (see Figure 15 of § 73.699).

(iv) Generally, a composite signal of characteristics identical to those prescribed in subdivision (iii) of this subparagraph, shall be inserted on field 2, line 19, at the remote control point. However, to permit a separate determination to be made of the effects of the transmitter and the studio transmitter link on system performance, the composite signal on field 2, line 19 may be inserted at the transmitter input. Alternatively, in lieu of the composite signal, a licensee may insert any suitable test signal on field 2 of line 19, either at the remote control point or at the transmitter. When such signals are transmitted at the same time as program material and/or the required test signals, the characteristics of the licensee-selected signals shall be such as to minimize the possibility that their transmission will result in interference with the required test signals, or in degradation of the picture or sound signals. Figures 6 and 7 of § 73.699 identify the numbered lines and fields referred to in this subparagraph.

(2) The required test signals shall be transmitted continuously during all periods of regular station operation.

(3) The required test signals shall be observed immediately after commencement of operation, and subsequently thereafter with intervals between successive observations not exceeding one-half hour. More frequent observations shall be made as necessary to insure proper performance of the transmitter and associated equipment.

(4) The date and time of each observation of the test signals shall be entered in the operating log, together with notations as to the results of these observations.

(5) Any signals or noise already existing on lines 18 and 19 (e.g., network test signals), shall be erased prior to the insertion in the vertical interval of locally generated test signals.

NOTE: Paragraph (f) of § 73.676 shall not become effective until October 1, 1972, by which time the equipment necessary for the generation and vertical interval insertion of the required test signals should be generally available.

(g) The remote control and monitoring equipment shall be calibrated and tested and the television broadcast transmitter shall be inspected as often as is necessary to insure operation in accordance with the rules in this Subpart E; in any event at least 5 days each week, with an interval of not less than 12 hours elapsing between successive inspections, provided, however, that the required calibration, testing and inspection may be made at successive times no longer than 1 week apart if the station is equipped with such additional transmitting and/or switching facilities as may be necessary to insure that malfunctioning of the main visual or aural transmitters shall not preclude continued operation at a transmitter power output level of not less than 20 percent of the authorized output power of the malfunctioning transmitter. The facilities required for such continued operation shall be activated automatically by the malfunctioning of the main transmitter, or manually from the remote control point.

NOTE: Until April 30, 1974, noncommercial educational television broadcast stations on channels 14–70 operating by remote control may calibrate, test, and inspect their equipment at successive times not longer than 1 week apart, without having installed those additional transmitting and/or switching facilities whose availability is required in paragraph (g) as a condition precedent to the adoption of such a schedule.

(h) Upon completion of the calibration, testing, and inspection required by paragraphs (e) and (g) of this section, the inspecting operator shall enter a signed statement in the maintenance log that the required tests and inspection have been made, noting in detail the tests, adjustments, and repairs which were made to insure proper operation, and shall specify the amount of time, exclusive of travel time to and from the transmitter, which was devoted to this task. If complete repair could not be effected, the statement shall set forth in detail the items of equipment concerned, the nature of the defect and the reasons for failure to make the needed repairs.

NOTE: Subject to the specific exception set forth in the note appended to paragraph (g), all television broadcast stations on channels 14–70 authorized to operate by remote control prior to April 30, 1971, and not meeting all of the requirements of this section, are afforded a period of 1 year in which to achieve full compliance. On or before April 30, 1972, all such stations shall file new remote control applications, FCC Form 301–A, supplying all information required by § 73.677, and upon a grant thereof, operate in accordance with this section.

[36 F.R. 5504, Mar. 24, 1971, as amended at 36 F.R. 17429, Aug. 31, 1971; 36 F.R. 23913, Dec. 16, 1971; 36 F.R. 25413, Dec. 31, 1971; 37 F.R. 6402, Mar. 29, 1972]

§ 73.677 Remote control authorization.

(a) An application to operate a television broadcasting station by remote control, to add a remote control point, or to change the location of a remote control point shall be made on FCC Form 301–A. The application shall include the following information:

(1) The location of the control point, the reason for its choice if at other than the main studio, and the approximate airline distance from the control point to the television broadcast transmitter site.

(2) The number and purpose of the control and telemetry functions that will be provided at the control point.

(3) The method by which control functions will be transmitted to the television transmitter.

(4) The method by which telemetry data required by the rules will be transmitted from the television transmitter to the control point.

(5) A description of the fail-safe features of the remote control system which will insure that loss of either required control or telemetry will place the television transmitter in a nonradiating condition, pursuant to § 73.676(c).

(6) Measures taken to prevent tampering with or activation of transmitting and remote control equipment by unauthorized persons.

(7) A description of all apparatus maintained for off-the-air monitoring, with particular attention to features intended to insure that the demodulated visual signal is free from noise, interference, or from distortion introduced at the receiving point.

(8) A description of apparatus which will be maintained at the control point for the generation and reception of test signals, and of the apparatus employed for their insertion in and extraction from the vertical blanking interval.

(9) A description of any features of the transmitting plant intended to insure continuity of operation in the event of malfunctioning or failure of the main transmitter, and of the automatic or remote control switching arrangements to be utilized in connection therewith.

(10) A description of means employed or procedures which will be followed to make the daily frequency check required by § 73.690(c).

(11) The method of determining, at the control point, that tower obstruction lighting is functioning properly.

(12) A description of the facilities maintained at the control point to permit compliance with the Emergency Action Notification Procedures of § 73.932.

[36 F.R. 5505, Mar. 24, 1971]

§ 73.678 Fraudulent billing practices.

See § 73.1205 which is applicable to all television broadcast stations.

[35 F.R. 7900, May 22, 1970]

§ 73.679 Personal attacks; political editorials.

(a) When, during the presentation of views on a controversial issue of public importance, an attack is made upon the honesty, character, integrity or like personal qualities of an identified person or group, the licensee shall, within a reasonable time and in no event later than 1 week after the attack, transmit to the person or group attacked (1) notification of the date, time and identification of the broadcast; (2) a script or tape (or an accurate summary if a script or tape is not available) of the attack; and (3) an offer of a reasonable opportunity to respond over the licensee's facilities.

(b) The provisions of paragraph (a) of this section shall not be applicable (1) to attacks on foreign groups or foreign public figures; (2) to personal attacks which are made by legally qualified candidates, their authorized spokesmen, or those associated with them in the campaign, on other such candidates, their authorized spokesmen, or persons associated with the candidates in the campaign; and (3) to bona fide newscasts, bona fide news interviews, and on-the-spot coverage of a bona fide news event (including commentary or analysis contained in the foregoing programs, but the provisions of paragraph (a) of this section shall be applicable to editorials of the licensee).

NOTE: The fairness doctrine is applicable to situations coming within (b)(3), above, and, in a specific factual situation, may be applicable in the general area of political broadcasts (b)(2), above. See, section 315(a) of the Act, 47 U.S.C. 315(a); Public Notice: *Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance.* 29 F.R. 10415. The categories listed in (b)(3) are the same as those specified in section 315(a) of the Act.

(c) Where a licensee, in an editorial, (i) endorses or (ii) opposes a legally qualified candidate or candidates, the licensee shall, within 24 hours after the editorial, transmit to respectively (i) the other qualified candidate or candidates for the same office or (ii) the candidate opposed in the editorial (1) notification of the date and the time of the editorial; (2) a script or tape of the editorial; and (3) an offer of a reasonable opportunity for a candidate or a spokesman of the candidate to respond over the licensee's facilities: *Provided, however,* That where such editorials are broadcast within 72 hours prior to the day of the election, the licensee shall comply with the provisions of this paragraph sufficiently far in advance of the broadcast to enable the candidate or candidates to have a reasonable opportunity to prepare a response and to present it in a timely fashion.

[32 F.R. 10305, July 12, 1967, as amended at 33 F.R. 5364, Apr. 4, 1968]

§ 73.680 Equal employment opportunities.

(a) *General policy.* Equal opportunity in employment shall be afforded by all licensees or permittees of commercially or noncommercially operated standard, FM, television or international broadcast stations (as defined in this part) to all qualified persons, and no person shall be discriminated against in employment because of race, color, religion, national origin or sex.

(b) *Equal employment opportunity program.* Each station shall establish, maintain and carry out, a positive continuing program of specific practices designed to assure equal opportunity in every aspect of station employment policy and practice. Under the terms of its program, a station shall:

(1) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(2) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(3) Communicate the station's equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin or sex, and solicit their recruitment assistance on a continuing basis.

(4) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon race, color, religion, national origin or sex, from the station's personnel policies and practices;and working conditions.

(5) Conduct continuing review of job structure and employment practices and adopt positive recruitment, training, job design and other measures needed in order to insure genuine equality of opportunity to participate fully in all organizational units, occupations and levels of responsibility in the station.

(c) Applicants for construction permit for a new facility, for assignment of license or construction permit or for transfer of control (other than pro forma or involuntary assignments, and transfers), and applicants for renewal of license who have not previously done so, shall file with the Commission programs designed to provide equal employment opportunities for Negroes, orientals, American Indians, Spanish-surnamed Americans, and women, or amendments to such programs. Guidelines for the preparation of such programs are set out in section VI of the appropriate application forms. See 32 FCC 2d ——. A program need not be filed by any station having less than five full-time employees or with respect to any minority group which is represented in such insignificant numbers in the area that a program would not be meaningful. In the latter situation, a statement of explanation should be filed.

(Secs. 308–10, 48 Stat., as amended at 1084–1086; 47 U.S.C. 308–310) [35 F.R. 8827, June 6, 1970, as amended at 36 F.R. 25013, Dec. 28, 1971]

TV TECHNICAL STANDARDS

§ 73.681 Definitions.

Amplitude modulation (AM). A system of modulation in which the envelope of the transmitted wave contains a component similar to the wave form of the signal to be transmitted.

Antenna electrical beam tilt. The shaping of the radiation pattern in the vertical plane of a transmitting antenna by electrical means so that maximum radiation occurs at an angle below the horizontal plane.

Antenna height above average terrain. The average of the antenna heights above the terrain from two to ten miles from the antenna for the eight directions spaced evenly for each 45 degrees of azimuth starting with True North. (In general, a different antenna height will be determined in each direction from the antenna. The average of these various heights is considered the antenna height above the average terrain. In some cases less than 8 directions may be used. See § 73.684(d)).

Antenna mechanical beam tilt. The intentional installation of a transmitting antenna so that its axis is not vertical, in order to change the normal angle of maximum radiation in the vertical plane.

Antenna power gain. The square of the ratio of the root-mean-square free space field intensity produced at one mile in the horizontal plane, in millivolts per meter for one kilowatt antenna input power to 137.6 mv/m. This ratio should be expressed in decibels (db). (If specified for a particular direction, antenna power gain is based on the field strength in that direction only.)

Aspect ratio. The ratio of picture width to picture height as transmitted.

Aural transmitter. The radio equipment for the transmission of the aural signal only.

Aural center frequency. (1) The average frequency of the emitted wave when modulated by a sinusoidal signal; (2) the frequency of the emitted wave without modulation.

Blanking level. The level of the signal during the blanking interval, except the interval during the scanning synchronizing pulse and the chrominance subcarrier synchronizing burst.

Chrominance. The colorimetric difference between any color and a reference color of equal luminance, the reference color having a specific chromaticity.

Chrominance subcarrier. The carrier which is modulated by the chrominance information.

Color transmission. The transmission of color television signals which can be reproduced with different values of hue, saturation, and luminance.

Effective radiated power. The product of the antenna input power and the antenna power gain. This product should be expressed in kilowatts and in decibels above 1 kilowatt (dbk). (If specified for a particular direction, effective radiated power is based on the antenna power gain in that direction only. The licensed effective radiated power is based on the average antenna power gain for each horizontal plane direction. When a station is authorized to use a directional antenna or an antenna beam tilt, the direction and amount of maximum effective radiated power will also be specified.)

Field. Scanning through the picture area once in the chosen scanning pattern. In the line interlaced scanning pattern of two to one, the scanning of the alternate lines of the picture area once.

Frame. Scanning all of the picture area once. In the line interlaced scanning pattern of two to one, a frame consists of two fields.

Free space field intensity. The field intensity that would exist at a point in the absence of waves reflected from the earth or other reflecting objects.

Frequency modulation (FM). A system of modulation where the instantaneous radio frequency varies in proportion to the instantaneous amplitude of the modulating signal (amplitude of modulating signal to be measured after pre-emphasis, if used) and the instantaneous radio frequency is independent of the frequency of the modulating signal.

Frequency swing. The instantaneous departure of the frequency of the emitted wave from the center frequency resulting from modulation.

Interlaced scanning. A scanning process in which successively scanned lines are spaced an integral number of line widths, and in which the adjacent lines are scanned during successive cycles of the field frequency.

IRE standard scale. A linear scale for measuring, in IRE units, the relative amplitudes of the components of a television signal from a zero reference at blanking level, with picture information falling in the positive, and synchronizing information in the negative domain.

NOTE: When a carrier is amplitude modulated by a television signal in accordance with §73.682, the relationship of the IRE standard scale to the conventional measure of modulation is as follows:

Level	IRE standard scale (units)	Modulation percentage
Zero carrier	120	0
Reference white	100	12.5
Blanking	0	75
Synchronizing peaks (maximum carrier level)	−40	100

Luminance. Luminous flux emitted, reflected, or transmitted per unit solid angle per unit projected area of the source.

Monochrome transmission. The transmission of television signals which can be reproduced in gradations of a single color only.

Multiplex Transmission (Aural). A subchannel added to the regular aural carrier of a television broadcast station by means of frequency modulated subcarriers.

Negative transmission. Where a decrease in initial light intensity causes an increase in the transmitted power.

Peak power. The power over a radio frequency cycle corresponding in amplitude to synchronizing peaks.

Percentage modulation. As applied to frequency modulation, the ratio of the actual frequency swing to the frequency swing defined as 100 percent modulation, expressed in percentage. For the aural transmitter of television broadcast stations, a frequency swing of ±25 kilocycles is defined as 100 percent modulation.

Polarization. The direction of the electric field as radiated from the transmitting antenna.

Reference black level. The level corresponding to the specified maximum excursion of the luminance signal in the black direction.

Reference white level of the luminance signal. The level corresponding to the specified maximum excursion of the luminance signal in the white direction.

Scanning. The process of analyzing successively, according to a predetermined method, the light values of picture elements constituting the total picture area.

Scanning line. A single continuous narrow strip of the picture area containing highlights, shadows, and half-tones, determined by the process of scanning.

Standard television signal. A signal which conforms to the television transmission standards.

Synchronization. The maintenance of one operation in step with another.

Television broadcast band. The frequencies in the band extending from 54 to 890 megacycles which are assignable to television broadcast stations. These frequencies are 54 to 72 megacycles (channels 2 through 4), 76 to 88 megacycles (channels 5 and 6), 174 to 216 megacycles (channels 7 through 13), and 470 to 890 megacycles (channels 14 through 83).

Television broadcast station. A station in the television broadcast band transmitting simultaneous visual and aural signals intended to be received by the general public.

Television channel. A band of frequencies 6 megacycles wide in the television broadcast band and designated either by number or by the extreme lower and upper frequencies.

Television transmission standards. The standards which determine the characteristics of a television signal as radiated by a television broadcast station.

Television transmitter. The radio transmitter or transmitters for the transmission of both visual and aural signals.

Vestigial sideband transmission. A system of transmission wherein one of the generated sidebands is partially attenuated at the transmitter and radiated only in part.

Visual carrier frequency. The frequency of the carrier which is modulated by the picture information.

Visual transmitter. The radio equipment for the transmission of the visual signal only.

Visual transmitter power. The peak power output when transmitting a standard television signal.

[28 F.R. 13660, Dec. 14, 1963, as amended at 35 F.R. 5692, Apr. 8, 1970; 36 F.R. 5505, Mar. 24, 1971; 36 F.R. 17429, Aug. 31, 1971]

§ 73.682 Transmission standards and changes.

(a) *Transmission standards.* (1) The width of the television broadcast channel shall be 6 Mc/s.

(2) The visual carrier frequency shall be nominally 1.25 Mc/s above the lower boundary of the channel.

(3) The aural center frequency shall be 4.5 Mc/s higher than the visual carrier frequency.

(4) The visual transmission amplitude characteristic shall be in accordance with the chart designated as Figure 5 of § 73.699: *Provided, however,* That for stations operating on Channel 15–83 and employing a transmitter with maximum peak visual power output of 1 kilowatt or less the visual transmission amplitude characteristic may be in accordance with the chart designated as Figure 5a of § 73.699.

(5) The chrominance subcarrier frequency shall be 3.579545 Mc/s ± 10 cycles per second with a maximum rate of change not to exceed one-tenth cycle per second per second.

(6) For monochrome and color transmissions the number of scanning lines per frame shall be 525, interlaced two to one in successive fields. The horizontal scanning frequency shall be $^{2}/_{455}$ times the chrominance subcarrier frequency; this corresponds nominally to 15,750 cycles per second with an actual value of 15,734.264 ± 0.044 cycles per second). The vertical scanning frequency is $^{2}/_{525}$ times the horizontal scanning frequency; this corresponds nominally to 60 cycles per second (the actual value is 59.94 cycles per second). For monochrome transmissions only, the nominal values of line and field frequencies may be used.

(7) The aspect ratio of the transmitted television picture shall be 4 units horizontally to 3 units vertically.

(8) During active scanning intervals, the scene shall be scanned from left to right horizontally and from top to bottom vertically, at uniform velocities.

(9) A carrier shall be modulated within a single television channel for both picture and synchronizing signals. For monochrome transmission, the two signals comprise different modulation ranges in amplitude, in accordance with the charts designated as Figures 5 and 7 of § 73.699 for stations operating on Channels 2–14 or Figures 5a and 7 for stations operating on Channels 15–83 and employing a transmitter with maximum peak visual power output of 1 kilowatt or less. For color transmission, the two signals comprise different modulation ranges in amplitude except where the chrominance penetrates the synchronizing region and the burst penetrates the picture region, in accordance with the charts designated as Figures 5 and 6 of § 73.699 for stations operating on Channels 2–14 or Figures 5a and 6 for stations operating on Channels 15–83 and employing a transmitter with maximum peak visual power output of 1 kilowatt or less.

(10) A decrease in initial light intensity shall cause an increase in radiated power (negative transmission).

(11) The reference black level shall be represented by a definite carrier level, independent of light and shade in the picture.

(12) The blanking level shall be transmitted at 75±2.5 percent of the peak carrier level.

(13) The reference white level of the luminance signal shall be 12.5±2.5 percent of the peak carrier level.

(14) The signals radiated shall have horizontal polarization.

(15) The effective radiated power of the aural transmitter shall not be less than 10 percent nor more than 20 percent of the peak radiated power of the visual transmitter.

NOTE: Existing licensees presently authorized an aural effective radiated power greater than 20 percent of the peak visual effective radiated power may continue to so operate until March 1, 1966.

(16) The peak-to-peak variation of transmitter output within one frame of video signal due to all causes, including hum, noise, and low-frequency response, measured at both scanning synchronizing peak and blanking level, shall not exceed 5 percent of the average scanning

synchronizing peak signal amplitude. This provision is subject to change but is considered the best practice under the present state of the art. It will not be enforced pending a further determination thereof.

(17) The reference black level shall be separated from the blanking level by the setup interval, which shall be 7.5±2.5 percent of the video range from blanking level to the reference white level.

(18) For monochrome transmission, the transmitter output shall vary in substantially inverse logarithmic relation to the brightness of the subject. No tolerances are set at this time. This provision is subject to change but is considered the best practice under the present state of the art. It will not be enforced pending a further determination thereof.

(19) the color picture signal shall correspond to a luminance component transmitted as amplitude modulation of the picture carrier and a simultaneous pair of chrominance components transmitted as the amplitude modulation sidebands of a pair of suppressed subcarriers in quadrature.

(20) Equation of complete color signal.

(i) The color picture signal has the following composition:

$$E_M = E_Y' + \{E_Q' \sin(\omega t + 33^\circ) + E_I' \cos(\omega t + 33^\circ)\}$$

Where:

$E_Q' = 0.41(E_B' - E_Y') + 0.48(E_R' - E_Y')$.

$E_I' = -0.27(E_B' - E_Y') + 0.74(E_R' - E_Y')$.

$E_Y' = 0.30E_R' + 0.59E_G' + 0.11E_B'$.

For color-difference frequencies below 500 kc/s (see (iii) below), the signal can be represented by:

$$E_M = E_Y' + \left\{ \frac{1}{1.14} \left[\frac{1}{1.78}(E_B' - E_Y') \sin \omega t + (E_R' - E_Y') \cos \omega t \right] \right\}$$

(ii) The symbols in subdivision (i) of this subparagraph have the following significance:

E_M is the total video voltage, corresponding to the scanning of a particular picture element, applied to the modulator of the picture transmitter.

E_Y' is the gamma-corrected voltage of the monochrome (black-and-white) portion of the color picture signal, corresponding to the given picture element.

NOTE: Forming of the high frequency portion of the monochrome signal in a different manner is permissible and may in fact be desirable in order to improve the sharpness on saturated colors.

E_Q' and E_I' are the amplitudes of two orthogonal components of the chrominance signal corresponding respectively to narrow-band and wide-band axes.

E_R', E_G', and E_B' are the gamma-corrected voltages corresponding to red, green, and blue signals during the scanning of the given picture element.

ω is the angular frequency and is 2π times the frequency of the chrominance subcarrier.

The portion of each expression between brackets in (i) represents the chrominance subcarrier signal which carries the chrominance information.

The phase reference in the E_M equation in (i) is the phase of the burst+180°, as shown in Figure 8 of § 73.699. The burst corresponds to amplitude modulation of a continuous sine wave.

(iii) The equivalent bandwidth assigned prior to modulation to the color difference signals E_Q' and E_I' are as follows:

Q-channel bandwidth:
- At 400 kc/s less than 2 db down.
- At 500 kc/s less than 6 db down.
- At 600 kc/s at least 6 db down.

I-channel bandwidth:
- At 1.3 Mc/s less than 2 db down.
- At 3.6 Mc/s at least 20 db down.

(iv) The gamma corrected voltages E_R', E_G', and E_B' are suitable for a color picture tube having primary colors with the following chromaticities in the CIE system of specification:

	x	y
Red (R)	0.67	0.33
Green (G)	0.21	0.71
Blue (B)	0.14	0.08

and having a transfer gradient (gamma exponent) of 2.2 associated with each primary color. The voltages E_R', E_G', and E_B' may be respectively of the form $E_R^{1/\gamma}$, $E_G^{1/\gamma}$, and $E_B^{1/\gamma}$ although other forms may be used with advances in the state of the art.

NOTE: At the present state of the art it is considered inadvisable to set a tolerance on the value of gamma and correspondingly this portion of the specification will not be enforced.

(v) The radiated chrominance subcarrier shall vanish on the reference white of the scene.

NOTE: The numerical values of the signal specification assume that this condition will be reproduced as CIE Illuminant C ($x=0.310$, $y=0.316$).

(vi) E_Y', E_Q', E_I', and the components of these signals shall match each other in time to 0.05 μsecs.

(vii) The angles of the subcarrier measured with respect to the burst phase, when reproducing saturated primaries and their complements at 75 percent of full amplitude, shall be within ±10° and their amplitudes shall be within ±20 percent of the values specified above. The ratios of the measured amplitudes of the subcarrier to the luminance signal for the same saturated primaries and their complements shall fall between the limits of 0.8 and 1.2 of the values specified for their ratios. Closer tolerances may prove to be practicable and desirable with advance in the art.

(21) The interval beginning with the last 12 microseconds of line 17 and continuing through line 20 of the vertical blanking interval of each field may be used for the transmission of test signals subject to the conditions set forth below. Test signals may include signals used to supply reference modulation levels so that variations in light intensity of the scene viewed by the camera will be faithfully transmitted; signals designed to check the performance of the overall transmission system or its individual components; and cue and control signals related to the operation of the television broadcast station. Figures 6 and 7 of § 73.699 identify the numbered lines referred to in this subparagraph.

(i) Modulation of the television transmitter by such test signals shall be confined to the area between the reference white level and the blanking level except where such test signals are composed of chrominance subcarrier frequencies, in which case their negative excursions may extend into the synchronizing peak amplitude. In no case may the modulation excursions produced by test signals extend beyond peak-of-sync level.

(ii) The use of test signals shall not result in significant degradation of the program transmissions of the television broadcast station nor create emission components in excess of those permitted for normal program transmissions.

(iii) Test signals may not be transmitted during that portion of each line devoted to horizontal blanking.

(iv) A guard interval of no less than one-half line shall be maintained at all times between the last test signal and the beginning of the first picture scanning line.

(22) The intervals within the first and last 10 microseconds of lines 21 through 23 and 260 through 262 (on a "field" basis) may contain coded patterns for the purpose of electronic identification of television broadcast programs and spot announcements. No single transmission of such coded patterns shall exceed one second in duration. The transmission of these patterns shall not result in significant degradation of broadcast transmission.

(23) Multiplexing of the aural carrier may be employed for the purpose of transmitting telemetry and alerting signals from the transmitter site to the control point of a television broadcast station authorized to operate by remote control, subject to the following conditions:

(i) No observable degradation shall be caused to either the visual or aural signals.

(ii) The use of multiplexing shall not produce emissions outside the authorized television channel.

(iii) Multiplexing is limited to the use of a single subcarrier.

(iv) The maximum modulation of the aural carrier by the subcarrier shall not exceed 10 percent of the maximum permissible degree of modulation.

(v) The total modulation of the aural carrier, including that caused by the subcarrier, shall comply with the requirements of § 73.687(b)(7).

(vi) Multiplexing of the aural carrier shall not result in transmitting system output noise levels exceeding those specified in § 73.687(b) (4) and (5).

(vii) The instantaneous frequency of the subcarrier used to modulate the aural carrier shall fall within the range 20 to 50 kc./s.

(b) *Changes in transmission standards.* The Commission will consider the question whether a proposed change or modification of transmission standards adopted for television would be in the public interest, convenience and necessity, upon petition being filed by the person proposing such change or modification, setting forth the following:

(1) The exact character of the change or modification proposed;

(2) The effect of the proposed change or modification upon all other transmission standards that have been adopted by the Commission for television broadcast stations;

(3) The experimentation and field tests that have been made to show that the proposed change or modification accomplishes an improvement and is technically feasible;

(4) The effect of the proposed change or modification in the adopted standards upon operation and obsolescence of receivers;

Note: Should a change or modification in the transmission standards be adopted by the Commission, the effective date thereof will be determined in the light of the considerations mentioned in this subparagraph.

(5) The change in equipment required in existing television broadcast stations for incorporating the proposed change or modification in the adopted standards; and

(6) The facts and reasons upon which the petitioner bases his conclusion that the proposed change or modification would be in the public interest, convenience, and necessity.

(c) *Subscription television technical systems.* The Commission may specify deviation from the power determination and maintenance methods set forth in this section to the extent it deems necessary to permit proper operation of an approved subscription television technical system. Any decision to specify such deviation shall be solely at the discretion of the Commission.

[28 F.R. 13660, Dec. 14, 1963, as amended at 30 F.R. 3443, Mar. 6, 1965; 34 F.R. 14375, Sept. 13, 1969; 35 F.R. 6490, Apr. 23, 1970; 35 F.R. 6913, May 1, 1970; 36 F.R. 5505, Mar. 24, 1971; 36 F.R. 17429, Aug. 31, 1971]

§ 73.683 Field intensity contours.

(a) In the authorization of television broadcast stations, two field intensity contours are considered. These are specified as Grade A and Grade B and indicate the approximate extent of coverage over average terrain in the absence of interference from other television stations. Under actual conditions, the true coverage may vary greatly from these estimates because the terrain over any specific path is expected to be different from the average terrain on which the field strength charts were based. The required field intensities, F(50,50), in decibels above one microvolt per meter (dbu) for the Grade A and Grade B contours are as follows:

Note: It should be realized that the F(50,50) curves when used for Channels 14–83 are not based on measured data at distances beyond about 30 miles. Theory would indicate that the field intensities for Channels 14–83 should decrease more rapidly with distance beyond the horizon than for Channels 2–6, and modification of the curves for Channels 14–83 may be expected as a result of measurements to be made at a later date. For these reasons, the curves should be used with appreciation of their limitations in estimating levels of field intensity. Further, the actual extent of service will usually be less than indicated by these estimates due to interference from other stations. Because of these factors, the predicted field intensity contours give no assurance of service to any specific percentage of receiver locations within the distances indicated. In licensing proceedings these variations will not be considered.

	Grade A (dbu)	Grade B (dbu)
Channels 2–6	68	47
Channels 7–13	71	56
Channels 14–83	74	64

(b) The field intensity contours provided for herein shall be considered for the following purposes only:

(1) In the estimation of coverage resulting from the selection of a particular transmitter site by an applicant for a television station.

(2) In connection with problems of coverage arising out of application of § 73.636.

(3) In determining compliance with § 73.685(a) concerning the minimum field intensity to be provided over the principal community to be served.

§ 73.684 Prediction of coverage.

(a) All predictions of coverage made pursuant to this section shall be made without regard to interference and shall be made only on the basis of estimated field intensities. The peak power of the visual signal is used in making predictions of coverage.

(b) Predictions of coverage shall be made only for the same purposes as relate to the use of field intensity contours as specified in § 73.683(b).

(c) In predicting the distance to the field intensity contours, the F(50,50) field intensity charts (Figures 9 and 10 of § 73.699) shall be used. If the 50 percent field intensity is defined as that value exceeded for 50 percent of the time, these F(50,50) charts give the estimated 50 percent field intensities exceeded at 50 percent of the locations in decibels above one microvolt per meter. The charts are based on an effective power of 1 kilowatt radiated from a half-wave dipole in free space, which produces an unattenuated field strength at 1 mile of about 103 db above 1 microvolt per meter (137.6 millivolts per meter). To use the charts for other powers, the sliding scale associated with the charts should be trimmed and used as the ordinate scale. This sliding scale is placed on the charts with the appropriate gradation for power in line with the horizontal 40 db line on the charts. The right edge of the scale is placed in line with the appropriate antenna height gradations, and the charts then become direct reading (in μv/m and in db above 1 μv/m) for this power and antenna height. Where the antenna height is not one of those for which a scale is provided, the signal strength or distance is determined by interpolation between the curves connecting the equidistant points. Dividers may be used in lieu of the sliding scale.

(1) In predicting the distance to the Grade A and Grade B field intensity contours, the effective radiated power to be used is that radiated at the vertical angle corresponding to the depression angle between the transmitting antenna center of radiation and the radio horizon as determined individually for each azimuthal direction concerned. The depression angle is based on the difference in elevation of the antenna center of radiation above the average terrain and the radio horizon, assuming a smooth spherical earth with a radius of 5,280 miles, and shall be determined by the following equation:

$$A_h = 0.0153\sqrt{H}$$

Where:

A_h is the depression angle in degrees.

H is the height in feet of the transmitting antenna radiation center above average terrain of the 2–10 mile sector of the pertinent radial.

NOTE: It should be recognized that this formula is empirically derived for the limited purpose specified here. Its use for any other purpose may be inappropriate.

In cases where the relative field intensity at the depression angle determined by the above formula is 90 percent or more of the maximum field intensity developed in the vertical plane containing the pertinent radial, the maximum radiation shall be used.

(2) In predicting field intensities for other than the Grade A and Grade B contours, the effective radiated power to be used shall be based on the appropriate antenna vertical plane radiation pattern for the azimuthal direction concerned.

NOTE: Pursuant to amendment of § 73.684 by Report and Order, Docket 17253, effective May 8, 1970, television station licensees, permittees, and applicants will be subject to the following procedures, unless the requirements are postponed or changed by further order of the Commission:

(a) On or before July 7, 1970, licensees and permittees of all operating commercial television broadcast stations, and applicants for new commercial television stations or changes in the facilities of existing commercial television stations whose applications were tendered before April 8, 1970, shall submit to the Commission a showing as to the location of their stations' or proposed stations' predicted Grade A and Grade B contours, determined in accordance with § 73.684, as amended. This showing shall include maps showing these contours, except where stations or applicants have previously submitted material to the Commission containing such information and it is found upon careful examination that the contour locations indicated therein would not change, on any radial, when the locations are determined under amended § 73.684. In the latter cases, a sworn statement by a qualified engineer to this effect will satisfy this requirement and no contour maps need be submitted.

(b) Noncommercial educational stations (those operating on reserved or unreserved channels) shall submit the showings mentioned in paragraph (a) of this note with renewal applications due on or after July 1, 1970. Pending applicants for new or changed noncommercial educational facilities shall submit such showings on or before July 7, 1970. Permittees of such stations shall submit such showings with their initial applications for license.

(c) In any case in which a question arises requiring determination of the contour location of a particular existing or proposed station, the Commission may require the licensee, permittee or applicant involved to file the material mentioned in paragraph (a) of this Note at an earlier date than the dates otherwise specified.

(d) The antenna height to be used with these charts is the height of the radiation center of the antenna above the average terrain along the radial in question. In determining the average elevation of the terrain, the elevations between 2 and 10 miles from the antenna site are employed. Profile graphs shall be drawn for 8 radials beginning at the antenna site and extending 10 miles therefrom. The radials should be drawn for each 45 degrees of azimuth starting with True North. At least one radial must include the principal community to be served even though such community may be more than 10 miles from the antenna site. However, in the event none of the evenly spaced radials include the principal community to be served and one or more such radials are drawn in addition to the 8 evenly spaced radials, such additional radials shall not be employed in computing the antenna height above average terrain. Where the 2 to 10 mile portion of a radial extends in whole or in part over large bodies of water as specified in paragraph (e) of this section or extends over foreign territory but the Grade B intensity contour encompasses land area within the United States beyond the 10 mile portion of the radial, the entire 2 to 10 mile portion of the radial shall be included in the computation of antenna height above average terrain. However, where the Grade B contour does not so encompass United States land area and (1) the entire 2 to 10 mile portion of the radial extends over large bodies of water or foreign territory, such radial shall be completely omitted from the computation of antenna height above average terrain, and (2) where a part of the 2 to 10 mile portion of a radial extends over large bodies of water or over foreign territory, only that part of the radial extending from the 2 mile sector to the outermost portion of land area within the United States covered by the radial shall be employed in the computation of antenna height above average terrain. The profile graph for each radial should be plotted by contour intervals of from 40 to 100 feet and, where the data permits, at least 50 points of elevation (generally uniformly spaced) should be used for each radial. In instances of very rugged terrain where the use of contour intervals of 100 feet would result in several points in a short distance, 200- or 400-foot contour intervals may be used for such distances. On the other hand, where the terrain is uniform or gently sloping the smallest contour interval indicated on the topographic map (see paragraph (g) of this section) should be used, although only relatively few points may be available. The profile graphs should indicate the topography accurately for each radial, and the graphs should be plotted with the distance in miles as the abscissa and the elevation in feet above mean sea level as the ordinate. The profile graphs should indicate the source of the topographical data employed. The graph should also show the elevation of the center of the radiating system. The graph may be plotted either on rectangular coordinate paper or on special paper which shows the curvature of the earth. It is not necessary to take the curvature of the earth into consideration in this procedure, as this factor is taken care of in the charts showing signal intensities. The average elevation of the 8-mile distance between 2 and 10 miles from the antenna site should then be determined from the profile graph for each radial. This may be obtained by averaging a large number of equally spaced points, by using a planimeter, or by obtaining the median elevation (that exceeded for 50 percent of the distance) in sectors and averaging those values.

Note: The Commission will, upon a proper showing by an existing station that the application of this rule will result in an unreasonable power reduction in relation to other stations in close proximity, consider requests for adjustment in power on the basis of a common average terrain figure for the stations in question as determined by the Commission.

(e) In instances where it is desired to determine the area in square miles within the Grade A and Grade B field intensity contours, the area may be determined from the coverage map by planimeter or other approximate means;

in computing such areas, exclude (1) areas beyond the borders of the United States, and (2) large bodies of water, such as ocean areas, gulfs, sounds, bays, large lakes, etc., but not rivers.

(f) In cases where the terrain in one or more directions from the antenna site departs widely from the average elevation of the 2 to 10 mile sector, the prediction method may indicate contour distances that are different from what may be expected in practice. For example, a mountain ridge may indicate the practical limit of service although the prediction method may indicate otherwise. In such cases the prediction method should be followed, but a supplemental showing may be made concerning the contour distances as determined by other means. Such supplemental showing should describe the procedure employed and should include sample calculations. Maps of predicted coverage should include both the coverage as predicted by the regular method and as predicted by a supplemental method. When measurements of area are required, these should include the area obtained by the regular prediction method and the area obtained by the supplemental method. In directions where the terrain is such that negative antenna heights or heights below 100 feet for the 2 to 10 mile sector are obtained, a supplemental showing of expected coverage must be included together with a description of the method employed in predicting such coverage. In special cases, the Commission may require additional information as to terrain and coverage.

(g) In the preparation of the profile graphs previously described, and in determining the location and height above sea level of the antenna site, the elevation or contour intervals shall be taken from the United States Geological Survey Topographic Quadrangle Maps, United States Army Corps of Engineers maps or Tennessee Valley Authority maps, whichever is the latest, for all areas for which such maps are available. If such maps are not published for the area in question, the next best topographic information should be used. Topographic data may sometimes be obtained from State and municipal agencies. Data from Sectional Aeronautical Charts (including bench marks) or railroad depot elevations and highway elevations from road maps may be used where no better information is available. In cases where limited topographic data is available, use may be made of an altimeter in a car driven along roads extending generally radially from the transmitter site. Ordinarily the Commission will not require the submission of topographical maps for areas beyond 15 miles from the antenna site, but the maps must include the principal community to be served. If it appears necessary, additional data may be requested. United States Geological Survey Topographic Quadrangle Maps may be obtained from the United States Geological Survey, Department of the Interior, Washington, D.C., 20240. Sectional Aeronautical Charts are available from the United States Coast and Geodetic Survey, Department of Commerce, Washington, D.C., 20235.

[28 F.R. 13660, Dec. 13, 1963, as amended at 35 F.R. 5693, Apr. 8, 1970]

§ 73.685 Transmitter location and antenna system.

(a) The transmitter location shall be chosen so that, on the basis of the effective radiated power and antenna height above average terrain employed, the following minimum field intensity in decibels above one microvolt per meter (dbu) will be provided over the entire principal community to be served:

Channels 2-6	Channels 7-13	Channels 14-83
74 dbu	77 dbu	80 dbu

(b) Location of the antenna at a point of high elevation is necessary to reduce to a minimum the shadow effect on propagation due to hills and buildings which may reduce materially the intensity of the station's signals. In general, the transmitting antenna of a station should be located at the most central point at the highest elevation available. To provide the best degree of service to an area, it is usually preferable to use a high antenna rather than a low antenna with increased transmitter power. The location should be so chosen that line-of-sight can be obtained from the antenna over the principal community to be served; in no event should there be a major obstruction in this path. The antenna must be constructed so that it is as clear as possible of surrounding buildings or objects that would cause shadow problems. It is recognized that topography, shape of the desired service area, and population distribution may make the choice of a transmitter location difficult. In such cases, consideration may be given to the use of a directional antenna system, although it is generally preferable to choose a site where a nondirectional antenna may be employed.

(c) In cases of questionable antenna locations it is desirable to conduct propagation tests to indicate the field intensity expected in the principal community to be served and in other areas, particularly where severe shadow problems may be expected. In considering applications proposing the use of such locations, the commission may require site tests to be made. Such tests should be made in accordance with the measurement procedure in § 73.686, and full data thereon must be supplied to the Commission. Test transmitters should employ an antenna having a height as close as possible to the proposed antenna height, using a balloon or other support if necessary and feasible. Information concerning the authorization of site tests may be obtained from the Commission upon request.

(d) Present information is not sufficiently complete to establish "blanket areas" of television broadcast stations. A "blanket area" is that area adjacent to a transmitter in which the reception of other stations is subject to interference due to the strong signal from this station. The authorization of station construction in areas where blanketing is found to be excessive will be on the basis that the applicant will assume full responsibility for the adjustment of reasonable complaints arising from excessively strong signals of the applicant's station or take other corrective action.

(e) An antenna designed or altered to produce a noncircular radiation pattern in the horizontal plane is considered to be a directional antenna. Antennas purposely installed in such a manner as to result in the mechanical beam tilting of the major vertical radiation lobe are included in this category. Directional antennas may be employed for the purpose of improving service upon an appropriate showing of need. Stations operating on Channels 2–13 will not be permitted to employ a directional antenna having a ratio of maximum to minimum radiation in the horizontal plane in excess of 10 decibels. Stations operating on Channels 14–83 with transmitters delivering a peak visual power output of more than 1 kilowatt may employ directive transmitting antennas with a maximum to minimum radiation in the horizontal plane of not more than 15 decibels. Stations operating on Channels 14–83 and employing transmitters delivering a peak visual power output of 1 kilowatt or less are not limited as to the ratio of maximum to minimum radiation.

(f) Applications proposing the use of directional antenna systems must be accompanied by the following:

(1) Complete description of the proposed antenna system.

(2) Orientation of array with respect to true north; time phasing of fields from elements (degrees leading or lagging); space phasing of elements (in feet and degrees); and ratio of fields from elements. Where mechanical beam tilt is intended, the amount of tilt in degrees of the antenna vertical axis and the orientation of the downward tilt with respect to true north shall be specified.

(3) Horizontal and vertical plane radiation patterns showing the free space field intensity in millivolts per meter at 1 mile and the effective radiated power, in dbk, for each direction. The method by which the radiation patterns were computed or measured shall be fully described, including formulas used, equipment employed, sample calculations and tabulations of data. Sufficient vertical plane patterns shall be included to indicate clearly the radiation characteristics of the antenna above and below the horizontal plane. In cases where the angle at which the maximum vertical radiation varies with azimuth, a separate vertical radiation pattern shall be provided for each pertinent radial direction. The horizontal plane pattern shall be plotted on polar coordinate paper with reference to true north. The vertical plane patterns shall be plotted on rectangular coordinate paper with reference to the horizontal plane.

(4) Name, address, and qualifications of the engineer making the calculations.

(g) Applications proposing the use of television broadcast antennas within 200 feet of other television broadcast antennas operating on a channel within 20 percent in frequency of the proposed channel, or proposing the use of television broadcast antennas on Channels 5 or 6 within 200 feet of FM broadcast antennas, must include a showing as to the expected effect, if any, of such proximate operation.

(h) Where simultaneous use of antennas or antenna structures is proposed, the following provisions shall apply:

(1) In cases where it is proposed to use a tower of a standard broadcast station as a supporting structure for a television broadcast antenna, an appropriate application for changes in the radiating system of the standard broadcast station must be filed by the licensee thereof. A formal application (FCC Form 301, or FCC Form 340 for a noncommercial educational station) will be required if the proposal involves substantial change in the physical height or radiation characteristics of the standard broadcast antennas; otherwise an informal application will be acceptable. (In case of doubt, an informal application (letter) together with complete engineering data should be submitted.) An application may be required for other classes of stations when the tower is to be used in connection with a television station.

(2) When the proposed television antenna is to be mounted on a tower in the vicinity of a standard broadcast directional array and it appears that the operation of the directional antenna system may be affected, an engineering study must be filed with the television application concerning the effect of the television antenna on the directional pattern. Readjustment and field intensity measurements of the standard broadcast station may be required following construction of the television antenna.

(i) The provisions of Part 17 of this chapter shall govern the construction, marking and lighting requirements of antenna structures used by television broadcast stations.

(j) If a common tower is used for antenna and/or antenna supporting purposes by two or more licensees or permittees of television broadcast stations, or by one or more such licensees or permittees and one or more licensees or permittees of any other class or service, each permittee or licensee shall be responsible for painting and illuminating the structure when obstruction marking and lighting are required by the Commission.

[28 F.R. 13660, Dec. 14, 1963, as amended at 30 F.R. 11860, Sept. 16, 1965; 35 F.R. 5693, Apr. 8, 1970]

§ 73.686 Measurements for rule making purposes and upon request of the Commission.

(a) Except as provided for in § 73.612, television broadcast stations shall not be protected against any type of interference or propagation effect. Persons desiring to submit testimony, evidence, or data to the Commission for the purpose of showing that the technical standards contained in this subpart do not properly reflect any given types of interference or propagation effects may do so only in appropriate rule making proceedings to amend such technical standards. Persons making field intensity measurements for formal submission to the Commission in rule making proceedings, or making such measurements upon the request of the Commission, should comply with the procedure for making such measurements as outlined in the following paragraphs of this section.

(b) Measurements made to determine field intensities of television broadcast stations should be made with mobile equipment along roads which are as close and similar as possible to the radials showing topography which were submitted with the application for construction permit. Cluster and spot measurements may also be submitted, if accompanied by a complete showing of the procedures employed. Suitable measuring equipment and a continuous recording device must be employed, the chart of which is either directly driven from the speedometer of the automobile in which the equipment is mounted or so arranged that distances and identifying landmarks can be readily noted. The measuring equipment must be calibrated against recognized standards of field intensity and so constructed that it will maintain an acceptable accuracy of measurement while in motion or when stationary. The equipment should be so operated that the recorder chart can be calibrated directly in field intensity in order to facilitate analysis of the chart. The receiving antenna must be horizontally polarized and should be nondirectional.

(c) Mobile measurements should be made with a minimum chart speed of 3 inches per mile and preferably 5 or 6 inches per mile. Locations shall be noted on the recorder chart as frequently as necessary to fix definitely the relation between the measured field intensity and the location. The time constant of the equipment should be such as to permit adequate analysis of the charts, and the time constant employed shall be shown. Measurements should be made to a point on each radial well beyond the particular contour under investigation.

(d) While making field intensity measurements either the visual or the aural transmitter may be used. If the visual transmitter is used, it is recommended that a black picture be transmitted or that the transmitter be operated at black level without synchronization peaks. Operation at a power somewhat less than black level is permissible but too great a reduction in power is not recommended due to the difficulty of recording weak signals. In any event, an appropriate factor shall be used to convert the readings obtained to the field strength that would exist on synchronization peaks while operating at the authorized power.

(e) After the measurements are completed, the recorder chart should be divided into not less than 15 sections on each equivalent radial from the station. The field intensity in each section of the chart should be analyzed to determine the field intensity received 50 percent of the distance (median field) throughout the section, and this median field intensity associated with the corresponding sector of the radial. The field intensity figures must be corrected for a receiving antenna elevation of 30 feet and for any directional effects of the automobile and receiving antenna not otherwise compensated. This data should be plotted for each radial, using log-log coordinate paper with distance as the abscissa and field intensity as the ordinate. A smooth curve should be drawn through these points (of median fields for all sectors) and this curve used to determine the distance to the desired contour. The distances obtained for each radial may then be plotted on the map of predicted coverage or on polar coordinate paper (excluding water areas, etc.) to determine the service and interference areas of a station.

(f) In certain cases the Commission may desire more information or recordings and in these instances special instructions will be issued.

(g) Data obtained in conjunction with field intensity measurements shall be submitted to the Commission in affidavit form in triplicate, including the following:

(1) Map or maps showing the roads or points where measurements were made, the service and/or interference areas determined by the prediction method and by the measurements, and any unusual terrain characteristics existing in these areas. The maps, preferably of a type showing topography in the area, should show the Grade A and Grade B field intensity contours.

(2) If a directional transmitting antenna is employed, a diagram on polar coordinate paper showing the predicted free space field intensity in millivolts per meter at 1 mile in all directions.

(3) A full description of the procedures and methods employed, including the type of equipment, the method of installation and operation, and calibration procedures.

(4) Complete data obtained during the survey, including calibration. (Only the original or one photostatic copy of the recording tapes, or representative samples, need be submitted.)

(5) Antenna system and power employed during the survey.

(6) Name, address, and qualifications of the engineer or engineers making the measurements.

§ 73.687 Transmitters and associated equipment.

(a) *Visual transmitter.* (1) For monochrome transmission only, the overall attenuation characteristics of the transmitter, measured in the antenna transmission line after the vestigial sideband filter (if used), shall not be greater than the following amounts below the ideal demodulated curve. (See Figure 11 of § 73.699.)

2 db at 0.5 Mc/s
2 db at 1.25 Mc/s

3 db at 2.0 Mc/s
6 db at 3.0 Mc/s
12 db at 3.5 Mc/s

The curve shall be substantially smooth between these specified points, exclusive of the region from 0.75 to 1.25 Mc/s. Output measurement shall be made with the transmitter operating into a dummy load of pure resistance and the demodulated voltage measured across this load. The ideal demodulated curve is that shown in Figure 11 of § 73.699. Stations operating on Channels 15–83 and employing a transmitter delivering maximum peak visual power output of 1 kilowatt or less not be required to comply with the provisions of this subparagraph.

(2) For color transmission, the standard given by subparagraph (1) of this paragraph applies except as modified by the following: A sine wave of 3.58 Mc/s introduced at those terminals of the transmitter which are normally fed the composite color picture signal shall produce a radiated signal having an amplitude (as measured with a diode on the R.F. transmission line supplying power to the antenna) which is down 6±2 db with respect to a signal produced by a sine wave of 200 kc/s. In addition, between the modulating frequencies of 2.1 and 4.1 Mc/s, the amplitude of the radiated signal shall not vary by more than ±2 db from its value at 3.58 Mc/s. At the modulating frequency of 4.18 Mc/s, the amplitude of the radiated signal shall not be down more than 4 db below its value of 3.58 Mc/s. Stations operating on Channels 15–83 and employing a transmitter delivering maximum peak visual power output of 1 kilowatt or less are not required to comply with the provisions of this subparagraph.

(3) The field strength or voltage of the lower sideband, as radiated or dissipated and measured as described in subparagraph (4) of this paragraph, shall not be greater than —20 db for a modulating frequency of 1.25 Mc/s or greater and in addition, for color, shall not be greater than —42 db for a modulating frequency of 3.579545 Mc/s (the color subcarrier frequency). For both monochrome and color, the field strength or voltage of the upper sideband as radiated or dissipated and measured as described in subparagraph (4) of this paragraph shall not be greater than —20 db for a modulating frequency of 4.75 Mc/s or greater. For stations operating on Channels 15–83 and employing a transmitter delivering maximum peak visual power output of 1 kilowatt or less, the field strength or voltage of the upper and lower sidebands, as radiated or dissipated and measured as described in subparagraph (4) of this paragraph, shall depart from the visual amplitude characteristic (Figure 5a of § 73.699) by no more than the following amounts:

—2 db at 0.5 Mc/s below visual carrier frequency;
—2 db at 0.5 Mc/s above visual carrier frequency;
—2 db at 1.25 Mc/s above visual carrier frequency;
—3 db at 2.0 Mc/s above visual carrier frequency;
—6 db at 3.0 Mc/s above visual carrier frequency;
—12 db at 3.5 Mc/s above visual carrier frequency;
—8 db at 3.58 Mc/s above visual carrier frequency (for color transmission only).

The field strength or voltage of the upper and lower sidebands, as radiated or dissipated and measured as described in subparagraph (4) of this paragraph, shall not exceed a level of —20 db for a modulating frequency of 4.75 Mc/s or greater. If interference to the reception of other stations is caused by out-of-channel lower sideband emission, the technical requirements applicable to stations operating on Channels 2–13 shall be met.

(4) The attenuation characteristics of a visual transmitter shall be measured by application of a modulating signal to the transmitter input terminals in place of the normal composite television video signal. The signal applied shall be a composite signal composed of a synchronizing signal to establish peak output voltage plus a variable frequency sine wave voltage occupying the interval between synchronizing pulses. (The "synchronizing signal" referred to in this section means either a standard synchronizing wave form or any pulse that will properly set the peak.) The axis of the sine wave in the composite signal observed in the output monitor shall be maintained at an amplitude 0.5 of the voltage at synchronizing peaks. The amplitude of the sine wave input shall be held at a constant value. This constant value should be such that at no modu-

lating frequency does the maximum excursion of the sine wave, observed in the composite output signal monitor, exceed the value 0.75 of peak output voltage. The amplitude of the 200 kilocycle sideband shall be measured and designated zero db as a basis for comparison. The modulation signal frequency shall then be varied over the desired range and the field strength or signal voltage of the corresponding sidebands measured. As an alternate method of measuring, in those cases in which the automatic d-c insertion can be replaced by manual control, the above characteristic may be taken by the use of a video sweep generator and without the use of pedestal synchronizing pulses. The d-c level shall be set for midcharacteristic operation.

(5) A sine wave, introduced at those terminals of the transmitter which are normally fed the composite color picture signal, shall produce a radiated signal having an envelope delay, relative to the average envelope delay between 0.05 and 0.20 Mc/s, of zero microseconds up to a frequency of 3.0 Mc/s; and then linearly decreasing to 4.18 Mc/s so as to be equal to −0.17 μsecs at 3.58 Mc/s. The tolerance on the envelope delay shall be ±0.05 μsecs at 3.58 Mc/s. The tolerance shall increase linearly to ±0.1 μsec down to 2.1 Mc/s, and remain at ±0.1 μsec down to 0.2 Mc/s. (Tolerances for the interval of 0.0 to 0.2 Mc/s are not specified at the present time.) The tolerance shall also increase linearly to ±0.1 μsec at 4.18 Mc/s.

(6) The radio frequency signal, as radiated, shall have an envelope as would be produced by a modulating signal in conformity with § 73.682 and Figure 6 or 7 of § 73.699, as modified by vestigial sideband operation specified in Figure 5 of § 73.699. For stations operating on Channels 15–83 the radio frequency signal as radiated, shall have an envelope as would be produced by a modulating signal in conformity with § 73.682 and Figure 6 or 7 of § 73.699.

(7) The time interval between the leading edges of successive horizontal pulses shall vary less than one half of one percent of the average interval. However, for color transmissions, § 73.682 (a) (5) and (6) shall be controlling.

(8) The rate of change of the frequency of recurrence of the leading edges of the horizontal synchronizing signals shall be not greater than 0.15 percent per second, the frequency to be determined by an averaging process carried out over a period of not less than 20, nor more than 100 lines, such lines not to include any portion of the blanking interval. However, for color transmissions, § 73.682(a) (5) and (6) shall be controlling.

(9) For color transmission the transfer characteristic (that is the relationship between the transmitter RF output and video signal input) shall be substantially linear between the reference black and reference white levels.

(b) *Aural transmitter.* (1) The transmitter shall operate satisfactorily with a frequency swing of ±25 kilocycles, which is considered 100 percent modulation. It is recommended, however, that the transmitter be designed to operate satisfactorily with a frequency swing of at least ±40 kilocycles.

(2) The transmitting system (from input terminals of microphone pre-amplifier, through audio facilities at the studio, through telephone lines or other circuits between studio and transmitter, through audio facilities at the transmitter, and through the transmitter, but excluding equalizers for the correction of deficiencies in microphone response) shall be capable of transmitting a band of frequencies from 50 to 15,000 cycles. Pre-emphasis shall be employed in accordance with the impedance-frequency characteristic of a series inductance-resistance network having a time constant of 75 microseconds. (See Figure 12 of § 73.699.) The deviation of the system response from the standard pre-emphasis curve shall lie between two limits as shown by Figure 12 of § 73.699. The upper of these limits shall be uniform (no deviation) from 50 to 15,000 cycles. The lower limit shall be uniform from 100 to 7,500 cycles, and three db below the upper limit; from 100 to 50 cycles the lower limit shall fall from three db limit at a uniform rate of one db per octave (4 db at 50 cycles); from 7,500 to 15,000 cycles the lower limit shall fall from three db limit at a uniform rate of two db per octave (5 db at 15,000 cycles).

(3) At any modulating frequency between 50 and 15,000 cycles and at modulation percentages of 25 percent, 50 percent, and 100 percent, the combined audio frequency harmonics measured in the output of the system shall not exceed the root-mean-square values given in the following table:

Modulation frequency	*Distortion (percent)*
50 to 100 cycles	3.5
100 to 7,500 cycles	2.5
7,500 to 15,000 cycles	3.0

(i) Measurement shall be made employing 75 microsecond de-emphasis in the measuring equipment and 75 microsecond pre-emphasis in the transmitting equipment, and without compression if a compression amplifier is employed. Harmonics shall be included to 30 kc/s.

NOTE: Measurements of distortion using de-emphasis in the measuring equipment are not practical at the present time for the range 7,500 to 15,000 cycles for 25 and 50 percent modulation. Therefore, measurements should be made at 100 percent modulation and on at least the following modulating frequencies: 50, 100, 400, 1,000, 5,000, 10,000, and 15,000 cycles. At 25 and 50 percent modulation, measurements should be made on at least the following modulating frequencies: 50, 100, 400, 1,000 and 5,000 cycles.

(ii) It is recommended that none of the three main divisions of the system (transmitter, studio to transmitter circuit, and audio facilities) contribute over one-half of these percentages, since at some frequencies the total distortion may become the arithmetic sum of the distortions of the divisions.

(4) The transmitting system output noise level (frequency modulation) in the band of 50 to 15,000 cycles shall be at least 55 db below the audio frequency level representing a frequency swing of ±25 kc/s.

NOTE: For the purpose of these measurements, the visual transmitter should be inoperative since the exact amount of noise permissible from that source is not known at this time.

(5) The transmitting system output noise level (amplitude modulation) in the band of 50 to 15.000 cycles shall be at least 50 db below the level representing 100 percent amplitude modulation.

NOTE: For the purpose of these measurements, the visual transmitter should be inoperative since the exact amount of noise permissible from that source is not known at this time.

(6) If a limiting or compression amplifier is employed, precaution should be maintained in its connection in the circuit due to the use of pre-emphasis in the transmitting system.

(7) The percentage of modulation shall be maintained as high as possible consistent with good quality of transmission and good broadcast practice. In no case is it to exceed 100 percent on peaks of frequent recurrence. Generally, it should not be less than 85 percent on peaks of frequent recurrence; but where necessary to avoid objectionable loudness modulation may be reduced to whatever level is necessary, even if the resulting modulation is substantially less than 85 percent on peaks of frequent recurrence.

(c) *Requirements applicable to both visual and aural transmitters.* (1) Automatic means shall be provided in the visual transmitter to maintain the carrier frequency within ±one kilocycle of the authorized frequency; automatic means shall be provided in the aural transmitter to maintain the carrier frequency 4.5 megacycles above the actual visual carrier frequency within ±one kilocycle.

(2) The transmitters shall be equipped with suitable indicating instruments for the determination of operating power and with other instruments necessary for proper adjustment, operation, and maintenance of the equipment.

(3) Adequate provision shall be made for varying the output power of the transmitters to compensate for excessive variations in line voltage or for other factors affecting the output power.

(4) Adequate provisions shall be provided in all component parts to avoid overheating at the rated maximum output powers.

(d) *Construction.* In general, the transmitters shall be mounted either on racks and panels or in totally enclosed frames protected as required by the provisions of the National Electrical Code concerning transmitting equipment at radio and television stations, and as set forth below:

(1) Means shall be provided for making all tuning adjustments, requiring voltages in excess of 350 volts to be applied to the circuit, from the front of the panels with all access doors closed.

(2) Proper bleeder resistors or other automatic means shall be installed across all the capacitor banks to lower any voltage which may remain accessible with access door open to less than 350 volts within two seconds after the access door is opened.

(3) All plate supply and other high voltage equipment, including transformers, filters, rectifiers and motor generators, shall be protected so as to prevent injury to operating personnel.

(i) Commutator guards shall be provided on all high voltage rotating machinery. Coupling guards should be provided on motor generators.

(ii) Power equipment and control panels of the transmitters shall meet the above requirements (exposed 220-volt A. C. switching equipment on the front of the power control panels is not recommended but is not prohibited).

(iii) Power equipment located at a television broadcast station not directly associated with the transmitters (not purchased as part of same), such as power distribution panels, are not subject to the provisions of this subpart.

(4) The following provisions shall be applicable to metering equipment:

(i) All instruments having more than 1,000 volts potential to ground on the movement shall be protected by a cage or cover in addition to the regular case. (Some instruments are designed by the manufacturers to operate safely with voltages in excess of 1,000 volts on the movement. If it can be shown by the manufacturer's rating that the instrument will operate safely at the applied potential, additional protection is not necessary.)

(ii) In case the plate voltmeters are located on the low potential side of the multiplier resistors with the high potential terminal of the instruments at or less than 1,000 volts above ground, no protective case is required. However, it is good practice to protect voltmeters subject to more than 5,000 volts with suitable over-voltage protective devices across the instrument terminals in case the winding opens.

(iii) Transmission line meters and any other radio frequency instrument which may be necessary for the operator to read shall be so installed as to be read easily and accurately without the operator having to risk contact with circuits carrying high potential radio frequency energy.

(e) *Wiring and shielding.* (1) The transmitter panels or units shall be wired in accordance with standard practice, such as insulated leads properly cabled and supported, coaxial cables, or rigid bus bar properly insulated and protected.

(2) Wiring between units of the transmitters, with the exception of circuits carrying radio frequency energy or video energy, shall be installed in conduits or approved fiber or metal raceways to protect it from mechanical injury.

(3) Circuits carrying radio frequency or video energy between units shall be coaxial cables, two wire balanced lines, or properly shielded lines.

(4) All stages or units shall be adequately shielded and filtered to prevent interaction and radiation.

(5) The frequency and modulation monitors and associated radio frequency lines to the transmitter shall be thoroughly shielded.

(f) *Auxiliary transmitters.* Auxiliary transmitters may not exceed the power rating of the main transmitters. As a general guide, specifications for auxiliary transmitters should conform as much as possible to those of the main transmitters. No requirements are set forth at this time.

(g) *Installation.* (1) The installation of transmitting equipment shall be made in suitable quarters.

(2) Suitable facilities shall be provided for the welfare and comfort of the operator

(h) *Other technical data.* An accurate circuit diagram, as furnished by the manufacturer of the equipment, shall be retained at the transmitter location.

(i) *Operation.* (1) Spurious emissions, including radio frequency harmonics, shall be maintained at as low a level as the state of the art permits. As measured at the output terminals of the transmitter (including harmonic filters, if required) all emissions removed in frequency in excess of 3 Mc/s above or below the respective channel edge shall be attenuated no less than 60 db. below the visual transmitted power. (The 60 db. value for television transmitters specified in this rule should be considered as a temporary requirement which may be increased at a later date, especially when more higher-powered equipment is utilized. Stations should, therefore, give consideration to the installation of equipment with greater attenuation than 60 db.) In the event of interference caused to any service greater attenuation will be required.

(2) If a limiting or compression amplifier is used in conjunction with the aural transmitter, due operating precautions should be maintained because of pre-emphasis in the transmitting system.

(j) *Studio equipment.* Studio equipment shall be subject to all the above requirements where applicable, except as follows:

(1) If properly covered by an underwriter's certificate, it will be considered as satisfying safety requirements.

(2) The pertinent provisions of the National Electrical Code concerning transmitting equipment at radio and television stations shall apply for voltages only when in excess of 500 volts.

(3) No specific requirements are made relative to the design and acoustical treatment of studios. However, the design of studios, particularly the main studio, shall be compatible with the required performance characteristics of television broadcast stations.

(k) *Subscription television technical systems.* The Commission may specify deviation from the transmitter and associated equipment requirements set forth in this section to the extent it deems necessary to permit proper operation of an approved subscription television technical system. Any decision to specify such deviation shall be solely at the discretion of the Commission.

[28 F.R. 13660, Dec. 14, 1963, as amended at 30 F.R. 8967, July 16, 1965; 33 F.R. 15423, Oct. 17, 1968; 34 F.R. 14375, Sept. 13, 1969]

§ 73.688 Indicating instruments.

(a) Each television broadcast station shall be equipped with indicating instruments for measuring the direct plate voltage and current of the last radio stage of the visual and aural transmitters and the transmission line radio frequency current, voltage, or power of both transmitters; such instruments shall conform to the specifications therefor set forth in this subpart.

(b) The following requirements and specifications shall apply to indicating instruments used by television broadcast stations in compliance with paragraph (a) of this section:

(1) Length of scale shall be not less than $2\frac{3}{10}$ inches.

(2) Accuracy shall be at least 2 percent of the full scale reading.

(3) Scale shall have at least 40 divisions.

(4) Full scale reading shall be not greater than five times the minimum normal indication.

(5) No specifications are prescribed at this time regarding the peak indicating device required by § 73.689(b).

(c) Any required instrument, the accuracy of which is questionable, shall not be employed. Repairs and calibration of instruments shall be made by the manufacturer, or by an authorized instrument repair service of the manufacturer, or by some other properly qualified or equipped instrument repair service. In any case, the repaired instrument must be supplied with a certificate of calibration.

(d) [Reserved]

(e) The function of each instrument used in the equipment shall be clearly and permanently shown on the instrument itself or on the panel immediately adjacent thereto.

(f) In the event that any one of the indicating instruments required by paragraph (a) of this section becomes defective when no substitute which conforms with the required specifications is available, the station may be operated without the defective instrument pending its repair or replacement for a period not in excess of 60 days: *Provided,* That:

(1) Appropriate entries shall be made in the maintenance log of the station to show the date and time the equipment was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the instrument is found to be defective and immediately after the repaired or replacement instrument has been installed and is functioning properly.

(3) If the defective instrument is a plate voltmeter or plate ammeter in the last radio stage, the operating power shall be maintained by means of the radio frequency transmission line meter.

(4) If conditions beyond the control of the licensee prevent the restoration of the meter to service within the above allowed period, informal request may be filed in accordance with § 1.549 of this chapter with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

(g) Digital meters, printers, or other numerical readout devices may be used in addition to or in lieu of indicating instruments meeting the specifications of paragraphs (a) and (b) of this section. If a single digital device is used at the transmitter for reading and logging of operating parameters, either (1) indicating instruments meeting the above-mentioned specifications shall be installed in the transmitter and antenna circuit, or (2) a spare digital device shall be maintained at the transmitter with provision for its rapid substitution for the main device should that device malfunction. The readout of the device shall include at least three digits and shall indicate the value or a decimal multiple of the value of the parameter being read to an accuracy of at least 2 percent. The multiplier to be applied to the reading of each parameter shall be indicated at the operating position of a switch used to select the parameter for display, or on the face of an automatically printed log at least once for each calendar day.

[28 F.R. 13660, Dec. 14, 1963, as amended at 32 F.R. 13511, Sept. 27, 1967]

§ 73.689 Operating power.

(a) *Determination*—(1) *Visual transmitter*. The operating power of the visual transmitter shall be determined at the output terminals of the transmitter, which includes any vestigial sideband and harmonic filters which may be used during normal operation. For this determination the average power output shall be measured while operating into a dummy load of substantially zero reactance and a resistance equal to the transmission line characteristic impedance. During this measurement the transmitter shall be modulated only by a standard synchronizing signal with blanking level set at 75 percent of peak amplitude as observed in an output monitor, and with this blanking level amplitude maintained throughout the time interval between synchronizing pulses. If electrical devices are used to determine the output power, such devices shall permit determination of this power to within an accuracy of ±5 percent of the power indicated by the full scale reading of the electrical indicating instrument of the device. If temperature and coolant flow indicating devices are used to determine the power output, such devices shall permit determination of this power to within an accuracy of 4 percent of measured average power output. The peak power output shall be the power so measured in the dummy load multiplied by the factor 1.68. During this measurement the direct plate voltage and current of the last radio stage and the transmission line meter shall be read and compared with similar readings taken with the dummy load replaced by the antenna. These readings shall be in substantial agreement.

(2) *Aural transmitter*. The operating power of the aural transmitter shall be determined by either the direct or indirect method.

(i) Using the direct method, the power shall be measured at the output terminals of the transmitter while operating into a dummy load of substantially zero reactance and a resistance equal to the transmission line characteristic impedance. The transmitter shall be unmodulated during this measurement. If electrical devices are used to determine the output power, such devices shall permit determination of this power to within an accuracy of ±5 percent of the power indicated by the full scale reading of the electrical indicating instrument of the device. If temperature and coolant flow indicating devices are used to determine the power output, such devices shall permit determination of this power to within an accuracy of 4 percent of measured average power output. During this measurement the direct plate voltage and current of the last radio stage and the transmission line meter shall be read and compared with similar readings taken with the dummy load replaced by the antenna. These readings shall be in substantial agreement.

(ii) Using the indirect method, the operating power is the product of the plate voltage (E_p) and the plate current (I_p) of the last radio stage, and an efficiency factor, F, as follows:

$$\text{Operating power} = E_p \times I_p \times F$$

(iii) The efficiency factor, F, shall originally be established by the transmitter manufacturer for each type of transmitter for which he submits data to the Commission, and shall be shown in the instruction books supplied to the customer with each transmitter. In the case of composite equipment, the factor F shall be furnished to the Commission by the applicant along with a statement of the basis used in determining such factor.

(b) *Maintenance*—(1) *Visual transmitter.* The operating power shall be maintained as near as is practicable to the authorized power and shall not be less than 80 percent nor more than 110 percent of the authorized power at any time, except as provided in subparagraph (3) of this paragraph. The peak power shall be monitored at the output terminals of the transmitter with a peak reading meter whose indications are proportional to peak voltage, current or power. The range and electrical accuracy of the meter and the physical characteristics of the meter scale shall be adequate to permit a determination that the power output does not exceed the prescribed tolerance. The meter shall be calibrated with the transmitter operating at 80, 100, and 110 percent of the authorized power as often as may be necessary to insure compliance with the requirements of this paragraph and in any event at intervals of no more than 6 months. In cases where the transmitter is incapable of operating at 110 percent of the authorized power output, the calibration may be made at a power output between 100 and 110 percent of the authorized power output. However, where this is done, the output meter shall be marked at the point of calibration of maximum power output, and the station will be deemed to be in violation of this rule if that power is exceeded. If any component in the power measuring circuit is replaced, the meter shall be recalibrated upon completion of such repairs. The upper and lower limits of permissible power deviation as determined by the prescribed calibration, shall be shown upon the meter either by means of adjustable red markers incorporated in the meter or by red marks placed upon the meter scale or glass face. These markings shall be checked and changed, if necessary, each time the meter is calibrated.

(2) *Aural transmitter.* (i) The operating power shall be maintained as near as practicable to the authorized power and shall not be less than 80 percent nor greater than 110 percent of authorized power except as indicated in subparagraph (3) of this paragraph.

(ii) When determined by the direct method, the operating power of the transmitter shall be monitored at the output terminals of the transmitter with a transmission line meter whose indications are proportional to voltage, current, or power. The range and electrical accuracy of the meter and the physical characteristics of the meter scale shall be adequate to permit a determination that the power output does not exceed the prescribed tolerance. The meter shall be calibrated with the transmitter operating at 80, 100, and 110 percent of the authorized power as often as may be necessary to insure compliance with the requirements of this paragraph and in all cases at intervals of no more than 6 months. In cases where the transmitter is incapable of operating at 110 percent of the authorized power output, the calibration may be made at a power output between 100 and 110 percent of the authorized power output. However, where this is done, the output meter shall be marked at the point of calibration of maximum power output, and the station will be deemed to be in violation of this rule if that power is exceeded. If any component in the power measuring circuit is replaced, the meter shall be recalibrated upon completion of such repairs. The upper and lower limits of permissible power deviation as determined by the prescribed calibration, shall be shown upon the meter either by means of adjustable red markers incorporated in the meter or by red marks placed upon the meter scale or glass face. These markings shall be checked and changed, if necessary, each time the meter is calibrated.

(3) *Reduced power*. In the event it becomes technically impossible to operate with the authorized power, the station may be operated with reduced power for a period of 10 days or less without further authority of the Commission: *Provided*, That the Commission and the Engineer in Charge of the radio district in which the station is located shall be immediately notified in writing if the station is unable to maintain the minimum operating schedule (specified in § 73.651) with authorized power and shall be subsequently notified upon resumption of operation with authorized power.

(c) *Subscription television technical systems*. The Commission may specify deviation from the transmission standards set forth in paragraph (a) of this section to the extent it deems necessary to permit proper operation of an approved subscription television technical system. Any decision to specify such deviation shall be solely at the discretion of the Commission.

[28 F.R. 13660, Dec. 14, 1963, as amended at 34 F.R. 2049, Feb. 12, 1969; 34 F.R. 14376, Sept. 13, 1969]

MONITORING EQUIPMENT

§ 73.690 Frequency measurements.

(a) The visual carrier frequency and the difference between the visual carrier frequency and the center frequency of the aural transmitter shall be checked as often as necessary to ensure that they are kept at all times within the prescribed tolerance. At least one such check shall be made each day.

(b) The daily frequency checks need not be an exact measurement of the actual operating frequencies but merely a determination that the transmitters are operating within the prescribed frequency tolerance. The choice of method for performing the daily frequency checks is left to the discretion of the licensee. However, whatever method used, it shall be capable of sufficient accuracy to reveal deviations of the operating frequencies in excess of the prescribed tolerance.

(c) The visual carrier frequency and the difference between the visual carrier frequency and the center frequency of the aural transmitter shall be measured as often as is necessary to ensure that they are maintained within the prescribed tolerance. The interval between successive measurements shall never be more than one month.

(d) The primary standard of frequency for radio frequency measurements shall be the national standard of frequency maintained by the National Bureau of Standards, Department of Commerce, Washington, D.C. The operating frequency of all radio stations will be determined by comparison with this standard or the standard signals of stations WWV, WWVB, WWVH, and WWVL of the National Bureau of Standards.

[29 F.R. 15520, Nov. 19, 1964]

§ 73.691 Modulation monitors.

(a) The licensee of each television broadcast station shall have in operation at the transmitter an approved modulation monitor for the aural transmitter. There shall also be employed sufficient monitoring equipment for the visual signal to determine that the signal complies with the requirements of this subpart.

NOTE: Approved aural modulation monitors are included on the Commission's "Radio Equipment List, Part A, Television Broadcast Equipment." Copies of this list are available for inspection at the Commission's office in Washington, D.C., and at each of its field offices.

(b) In the event the visual monitoring equipment or the aural modulation monitor becomes defective, the station may be operated without such equipment pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission: *Provided*, That:

(1) Appropriate entries shall be made in the operating log of the station to show the date and time the equipment was removed from and restored to service.

(2) The Engineer in Charge of the radio district in which the station is located shall be notified both immediately after the equipment is found to be defective and immediately after the repaired or replacement equipment has been installed and is functioning properly.

(3) During the period when the station is operated without the aural modulation monitor or the visual monitoring equipment, the licensee shall provide

other suitable means for insuring that the aural modulation is maintained within the tolerance prescribed in § 73.687 (b) (7) and that the visual signal is maintained in accordance with the requirements of this subpart.

(4) If conditions beyond the control of the licensee or permittee prevent the restoration of the monitor or monitoring equipment to service within the period specified above, an informal request in accordance with § 1.549 of this chapter may be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument or equipment.

[28 F.R. 13660, Dec. 14, 1963, as amended at 29 F.R. 15520, Nov. 19, 1964]

§ 73.692 General requirements for type approval of frequency and modulation monitors.

(a) Any manufacturer desiring to submit a monitor for type approval shall supply the Commission with full specification details (two sworn copies) as well as the test data specified in §§ 73.693 and 73.694. If this information appears to meet the requirements of the rules, shipping instructions will be issued to the manufacturer. The shipping charges to and from the Laboratory at Laurel, Maryland, shall be paid for by the manufacturer. Approval of a monitor will only be given on the basis of the data obtained from the sample monitor submitted to the Commission for test.

(b) In approving a monitor upon the basis of the tests conducted by the Laboratory, the Commission merely recognizes that the type of monitor has the inherent capability of functioning in compliance with the rules, if properly constructed, maintained, and operated. The Commission realizes that the frequency monitor may have limited range over which the visual indicator will determine deviations. Accordingly, it is necessary that adjunct equipment be used to determine major deviations.

(c) Additional rules with respect to withdrawal of type approval, modification of type approved equipment and limitations on the findings upon which type approval is based are set forth in Part 2, Subpart F, of this chapter.

§ 73.693 Requirements for type approval of frequency monitors.

(a) The specifications that frequency monitors shall meet before they will be approved by the Commission are as follows:

(1) The monitors shall have an accuracy of better than 500 cycles for 30 days of VHF operation, or for 10 days of UHF operation, and under ordinary conditions (ambient temperature from 10° centigrade to 40° centigrade above zero, humidity from 10 percent to 95 percent relative humidity, power supply variations from 90 percent to 110 percent, and other conditions which may affect its accuracy) encountered in television broadcast stations throughout the United States.

(2) The aural monitor shall indicate departures from the assigned aural center frequency with an indicating device having a minimum range extending from 3000 c/s below to 3000 c/s above the assigned frequency. Alternatively, the aural monitor shall indicate departures from the difference-frequency between the assigned aural center and visual carrier frequencies with an indicating device having a minimum range extending from 1500 c/s below to 1500 c/s above the difference-frequency. The visual monitor shall indicate departures from the assigned carrier frequency with an indicating device having a minimum range extending from 1500 c/s below to 1500 c/s above such frequency.

(3) The scale of the indicating device shall be calibrated in divisions of not more than 100 cycles.

(4) Means shall be provided for adjustment of the monitor indication to agree with an external standard.

(5) The monitors shall be capable of continuous operation and the circuits shall be such as to permit continuous monitoring of the transmitter carrier frequencies, and the difference-frequency between the visual and aural carriers if this method of measurement is used.

(6) Operation of the monitors shall have no adverse effect on the operation of either the aural or visual transmitters or the signals emitted therefrom and shall be independent of the frequency control of the transmitters.

(7) Means shall be provided for insuring power input level.

(8) General design, construction and operation shall be in accordance with good engineering practice.

(b) Tests to be made for approval of television broadcast frequency monitors. The manufacturer of a monitor shall submit data on the following at the time of requesting approval:

(1) Constancy of oscillator frequency, as measured daily for one month, or more.

(2) Constancy of oscillator frequency when subject to vibration tests which would correspond to the treatment received in shipping, handling and installing the instrument.

(3) Accuracy of reading of the frequency deviation instrument.

(4) Functioning of frequency adjustment device.

(5) Effects on frequency readings, of the changing of tubes, of voltage variations, and of variations of room temperature through a range from 10° to 40° C.

(6) Response of indicating instrument to small changes of frequency.

(7) General information on the effect of tilting or tipping or other tests to determine ability of equipment to withstand shipment.

(c) Various other tests may be made or required, such as effects of variation of input from the transmitter depending upon the character of the apparatus.

(d) Tests shall be conducted in such a manner as to approximate actual operating conditions as nearly as possible. The equipment shall be tested on the highest channel for which it is designed.

[28 F.R. 13660, Dec. 14, 1963, as amended at 34 F.R. 3806, Mar. 5, 1969]

§ 73.694 Requirements for type approval of aural modulation monitors.

(a) The required aural modulation monitor may or may not be a part of the frequency monitor.

(b) The specifications that the aural modulation monitor shall meet before it will be approved by the Commission are as follows:

(1) Means shall be provided for indicating that the signal input to the modulation monitor is in the range required for proper operations.

(2) A modulation peak indicating device shall be provided that can be set at any pre-determined value from 50 to 120 percent modulation (±25 kc/s swing is defined as 100 percent modulation) and for either positive or negative swings (i.e., either above or below transmitter center frequency).

(3) A quasi-peak indicator with a meter having the characteristics given below shall be used with a circuit such that peaks of modulation of duration between 40 and 90 milliseconds are indicated to 90 percent of full value and the discharge rate adjusted so that the pointer returns from full reading to within 10 percent of zero within 500 to 800 milliseconds. A switch shall be provided so that this meter will read either positive or negative swings.

(4) When modulation of a magnitude necessary to produce a deflection equivalent to 100 percent modulation is suddenly applied and left on, the indicating instrument shall not deflect beyond 110 percent on the first passage of the 100 percent mark and shall have excursion from the final value of less than 1 percent after one second or more.

(5) The meter scale shall be similar in appearance to that of a standard VU meter. The scale length between 0 and 100 percent modulation markings shall be at least 2.3 inches. In addition to other markings a small marker for 133 percent modulation, designated as such, should be included for the purpose of testing the transmitter with 33.3 kc/s swing.

(6) The indicated reading in percentage shall be accurate within ±5 (based on 100 percent modulation) at any percentage of modulation up to 100.

(7) The frequency characteristic curve as measured at 50 percent modulation shall not depart from a straight line more than ±½ db from 50 to 15,000 cycles Distortion shall be kept to a minimum.

(8) The monitor shall not absorb appreciable power from the transmitter.

(9) Operation of the monitor shall have no adverse effect on the operation of the transmitter.

(10) General design, construction, and operation shall be in accordance with good engineering practice.

(c) Tests to be made for approval of television broadcast aural modulation monitors. The manufacturer of a monitor shall submit data on the following at the time of requesting approval:

(1) Audio frequency response of the monitor from 50 to 15,000 cycles in db from the response at 400 cycles.

(2) Distortion in the response.

(3) Input signal power required.

(4) Permissible tolerance on input signal power to keep the meter reading correct within 5 percent units.

(5) Ballistic characteristics of the monitor indicator.

(d) Various other tests may be made or required depending on the character of the apparatus.

(e) Tests shall be conducted in such a manner as to approximate actual operating conditions as nearly as possible. The equipment shall be tested on the highest channel for which it is designed.

§ 73.698 Tables

TABLE I

MINUTES TO DECIMAL PARTS OF A DEGREE

Minutes	Degrees	Minutes	Degrees
1	0.01667	31	0.51667
2	.03333	32	.53333
3	.05	33	.55
4	.06667	34	.56667
5	.08333	35	.58333
6	.10	36	.60
7	.11667	37	.61667
8	.13333	38	.63333
9	.15	39	.65
10	.16667	40	.66667
11	.18333	41	.68333
12	.20	42	.70
13	.21667	43	.71667
14	.23333	44	.73333
15	.25	45	.75
16	.26667	46	.76667
17	.28333	47	.78333
18	.30	48	.80
19	.31667	49	.81667
20	.33333	50	.83333
21	.35	51	.85
22	.36667	52	.86667
23	.38333	53	.88333
24	.40	54	.90
25	.41667	55	.91667
26	.43333	56	.93333
27	.45	57	.95
28	.46667	58	.96667
29	.48333	59	.98333
30	.50	60	1.00

TABLE I—Continued

SECONDS TO DECIMAL PARTS OF A DEGREE

Seconds	Degrees	Seconds	Degrees
1	0.00028	31	0.00861
2	.00056	32	.00889
3	.00083	33	.00917
4	.00111	34	.00944
5	.00139	35	.00972
6	.00167	36	.01
7	.00194	37	.01028
8	.00222	38	.01056
9	.0025	39	.01083
10	.00278	40	.01111
11	.00306	41	.01139
12	.00333	42	.01167
13	.00361	43	.01194
14	.00389	44	.01222
15	.00417	45	.0125
16	.00444	46	.01278
17	.00472	47	.01306
18	.005	48	.01333
19	.00528	49	.01361
20	.00556	50	.01389
21	.00583	51	.01417
22	.00611	52	.01444
23	.00639	53	.01472
24	.00667	54	.015
25	.00694	55	.01528
26	.00722	56	.01556
27	.0075	57	.01583
28	.00778	58	.01611
29	.00806	59	.01639
30	.00833	60	.01667

TABLE II

MILES PER DEGREE OF LATITUDE DIFFERENCE

Middle latitude		Statute miles	Middle latitude		Statute miles
°	′		°	′	
25	0	68.828	38	0	68.968
	30	68.833		30	68.974
26	0	68.837	39	0	68.980
	30	68.842		30	68.986
27	0	68.847	40	0	68.992
	30	68.852		30	68.998
28	0	68.857	41	0	69.004
	30	68.862		30	69.011
29	0	68.867	42	0	69.017
	30	68.873		30	69.023
30	0	68.878	43	0	69.029
	30	68.883		30	69.035
31	0	68.889	44	0	69.041
	30	68.894		30	69.047
32	0	68.899	45	0	69.053
	30	68.905		30	69.060
33	0	68.911	46	0	69.066
	30	68.916		30	69.072
34	0	68.922	47	0	69.078
	30	68.928		30	69.084
35	0	68.933	48	0	69.090
	30	68.939		30	69.096
36	0	68.945	49	0	69.102
	30	68.951		30	69.108
37	0	68.957	50	0	69.115
	30	68.962			

TABLE III

Middle latitude degrees	Miles per degree of longitude difference (statute miles)									
	25	26	27	28	29	30	31	32	33	34
Minutes										
0	62. 728	62. 211	61. 675	61. 120	60. 547	59. 955	59. 345	58. 716	58. 070	57. 406
1	62. 720	62. 202	61. 666	61 111	60. 537	59. 945	59. 335	58. 706	58. 059	57. 395
2	62. 712	62. 193	61. 657	61. 101	60. 528	59. 935	59. 324	58. 695	58. 048	57. 384
3	62. 703	62. 184	61. 648	61. 092	60. 517	59. 925	59. 314	58. 684	58. 037	57. 373
4	62. 694	62. 176	61. 639	61. 082	60. 508	59. 915	59. 303	58. 674	58. 026	57. 362
5	62. 686	62. 167	61. 630	61. 073	60. 498	59. 905	59. 293	58. 663	58. 015	57. 350
6	62. 677	62. 158	61. 621	61. 064	60. 488	59. 895	59. 282	58. 652	58. 004	57. 339
7	62. 669	62. 149	61. 611	61. 054	60. 478	59. 885	59. 272	58. 642	57. 994	57. 328
8	62. 660	62. 140	61. 602	61. 045	60. 469	59. 875	59. 262	58. 631	57. 983	57. 316
9	62 652	62. 132	61. 593	61. 035	60. 459	59. 865	59. 252	58. 620	57. 972	57. 305
10	62. 644	62. 123	61. 584	61. 026	60. 449	59. 855	59. 241	58. 610	57. 961	57. 294
11	62. 635	62. 114	61. 575	61. 017	60. 440	59. 845	59. 231	58. 599	57. 950	57. 283
12	62. 627	62. 105	61. 566	61. 007	60. 430	59. 835	59. 221	58. 588	57. 939	57. 271
13	62 618	62. 096	61. 557	60. 997	60. 420	59. 825	59. 210	58. 578	57. 928	57. 260
14	62. 609	62. 088	61. 547	60. 988	60. 410	59. 814	59. 200	58. 567	57. 917	57. 249
15	62. 601	62. 079	61. 538	60. 979	60. 400	59. 804	59. 189	58. 556	57. 906	57. 238
16	62. 592	62. 070	61. 529	60. 969	60. 390	59. 794	59. 179	58. 546	57. 895	57. 227
17	62. 583	62. 061	61. 520	60. 959	60. 381	59. 784	59. 168	58. 535	57. 884	57. 215
18	62. 575	62. 052	61. 510	60. 950	60. 371	59. 774	59. 158	58. 524	57. 873	57. 204
19	62. 567	62. 044	61. 501	60. 940	60. 361	59. 764	59. 147	58. 514	57. 862	57. 192
20	62. 559	62. 035	61. 492	60 931	60. 352	59. 754	59. 137	58. 503	57. 851	57. 181
21	62. 550	62. 026	61. 483	60. 921	60. 342	59. 744	59. 127	58. 492	57. 840	57. 170
22	62 541	62. 017	61. 474	60. 912	60. 332	59. 734	59. 116	58. 481	57. 829	57. 159
23	62. 532	62. 008	61. 465	60. 902	60. 322	59. 723	59. 106	58. 470	57. 818	57. 147
24	62. 524	61. 999	61. 455	60. 893	60. 312	59. 713	59. 095	58. 460	57. 807	57. 136
25	62. 515	61. 990	61. 446	60. 883	60. 302	59. 703	59. 085	58. 449	57. 796	57. 125
26	62. 507	61. 981	61. 437	60. 874	60. 292	59. 693	59. 074	58 438	57. 785	57. 113
27	62. 498	61. 972	61. 428	60. 865	60 282	59. 683	59. 064	58. 428	57. 774	57. 102
28	62. 489	61. 963	61. 419	60. 855	60. 273	59 672	59. 054	58. 417	57. 763	57. 090
29	62. 480	61. 955	61. 409	60. 845	60. 263	59. 662	59. 043	58. 406	57. 752	57. 079

30	62.472	61.946	61.400	60.836	60.253	59.652	59.033	58.396	57.741	57.068
31	62.463	61.937	61.391	60.826	60.243	59.642	59.022	58.385	57.729	57.057
32	62.455	61.928	61.381	60.817	60.233	59.632	59.012	58.374	57.718	57.045
33	62.446	61.918	61.372	60.807	60.223	59.622	59.001	58.363	57.707	57.034
34	62.438	61.909	61.363	60.798	60.213	59.611	58.991	58.352	57.696	57.022
35	62.429	61.900	61.354	60.788	60.203	59.601	58.980	58.341	57.685	57.011
36	62.420	61.891	61.344	60.778	60.194	59.591	58.970	58.331	57.674	56.999
37	62.412	61.882	61.335	60.768	60.184	59.581	58.960	58.320	57.663	56.988
38	62.403	61.874	61.325	60.759	60.174	59.571	58.949	58.309	57.652	56.977
39	62.395	61.865	61.316	60.750	60.164	59.561	58.939	58.298	57.641	56.966
40	62.386	61.856	61.307	60.740	60.154	59.550	58.928	58.288	57.629	56.954
41	62.377	61.847	61.298	60.730	60.144	59.540	58.917	58.277	57.618	56.943
42	62.369	61.838	61.289	60.721	60.134	59.530	58.907	58.266	57.607	56.931
43	62.360	61.829	61.279	60.711	60.124	59.520	58.896	58.255	57.596	56.919
44	62.351	61.820	61.270	60.701	60.114	59.510	58.886	58.244	57.585	56.908
45	62.342	61.811	61.261	60.692	60.104	59.500	58.875	58.233	57.574	56.897
46	62.334	61.802	61.252	60.682	60.094	59.489	58.865	58.223	57.563	56.885
47	62.325	61.793	61.242	60.672	60.084	59.479	58.854	58.212	57.552	56.874
48	62.316	61.784	61.233	60.663	60.074	59.468	58.843	58.201	57.541	56.863
49	62.308	61.775	61.223	60.654	60.065	59.458	58.833	58.190	57.529	56.851
50	62.299	61.766	61.214	60.644	60.055	59.448	58.822	58.179	57.518	56.840
51	62.290	61.757	61.205	60.634	60.045	59.438	58.812	58.168	57.507	56.829
52	62.281	61.748	61.195	60.625	60.035	59.427	58.801	58.157	57.496	56.817
53	62.272	61.739	61.186	60.615	60.025	59.417	58.790	58.147	57.485	56.805
54	62.264	61.730	61.176	60.605	60.015	59.406	58.780	58.136	57.473	56.794
55	62.255	61.721	61.167	60.595	60.005	59.396	58.769	58.125	57.462	56.782
56	62.246	61.712	61.158	60.586	59.995	59.386	58.759	58.114	57.451	56.771
57	62.237	61.702	61.148	60.576	59.985	59.376	58.748	58.103	57.440	56.759
58	62.228	61.693	61.139	60.566	59.975	59.365	58.737	58.092	57.429	56.748
59	62.220	61.684	61.129	60.557	59.965	59.355	58.727	58.081	57.418	56.737

TABLE III—Continued

Middle latitude degrees	Miles per degree of longitude difference (statute miles)														
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
Minutes															
0	56.725	56.026	55.311	54.578	53.828	53.063	52.280	51.482	50.669	49.839	48.995	48.135	47.260	46.371	45.468
1	56.713	56.014	55.299	54.565	53.816	53.050	52.267	51.469	50.655	49.825	48.980	48.120	47.245	46.356	45.453
2	56.702	56.002	55.286	54.553	53.803	53.037	52.254	51.455	50.641	49.811	48.966	48.106	47.231	46.341	45.438
3	56.690	55.991	55.274	54.541	53.791	53.024	52.241	51.442	50.627	49.797	48.952	48.091	47.216	46.326	45.422
4	56.678	55.979	55.262	54.528	53.778	53.011	52.229	51.429	50.614	49.783	48.937	48.077	47.201	46.311	45.407
5	56.667	55.967	55.250	54.516	53.765	52.998	52.215	51.415	50.600	49.769	48.923	48.063	47.187	46.296	45.392
6	56.655	55.955	55.238	54.503	53.753	52.985	52.201	51.402	50.586	49.755	48.909	48.048	47.172	46.281	45.377
7	56.644	55.943	55.226	54.491	53.740	52.972	52.188	51.388	50.573	49.741	48.895	48.034	47.158	46.266	45.362
8	56.632	55.931	55.213	54.479	53.727	52.959	52.175	51.375	50.559	49.727	48.881	48.019	47.143	46.252	45.346
9	56.621	55.920	55.201	54.466	53.715	52.946	52.162	51.361	50.545	49.713	48.867	48.005	47.128	46.237	45.331
10	56.610	55.908	55.189	54.454	53.702	52.933	52.149	51.348	50.531	49.699	48.852	47.990	47.114	46.222	45.317
11	56.598	55.896	55.177	54.441	53.689	52.920	52.135	51.335	50.517	49.685	48.838	47.975	47.099	46.207	45.301
12	56.586	55.884	55.165	54.429	53.677	52.907	52.122	51.321	50.504	49.671	48.824	47.961	47.084	46.192	45.286
13	56.575	55.872	55.153	54.417	53.664	52.894	52.109	51.307	50.490	49.657	48.809	47.946	47.069	46.177	45.270
14	56.563	55.860	55.141	54.404	53.651	52.881	52.096	51.294	50.476	49.643	48.795	47.932	47.054	46.162	45.255
15	56.552	55.849	55.128	54.392	53.639	52.868	52.082	51.280	50.462	49.629	48.781	47.917	47.040	46.147	45.240
16	56.540	55.837	55.116	54.380	53.626	52.855	52.069	51.267	50.449	49.615	48.767	47.903	47.025	46.132	45.225
17	56.529	55.825	55.104	54.367	53.613	52.842	52.056	51.253	50.435	49.601	48.752	47.888	47.010	46.117	45.210
18	56.517	55.813	55.093	54.354	53.601	52.830	52.043	51.240	50.421	49.587	48.738	47.874	46.995	46.102	45.194
19	56.505	55.802	55.080	54.342	53.588	52.817	52.030	51.226	50.408	49.573	48.724	47.859	46.980	46.087	45.179
20	56.493	55.790	55.068	54.330	53.575	52.804	52.016	51.213	50.394	49.559	48.709	47.845	46.966	46.072	45.164
21	56.482	55.778	55.056	54.317	53.562	52.791	52.003	51.199	50.380	49.545	48.695	47.830	46.951	46.057	45.149
22	56.470	55.766	55.043	54.304	53.549	52.778	51.990	51.185	50.366	49.531	48.681	47.816	46.936	46.042	45.134
23	56.459	55.754	55.031	54.292	53.536	52.765	51.977	51.172	50.352	49.517	48.667	47.801	46.921	46.027	45.118
24	56.447	55.742	55.019	54.280	53.524	52.752	51.963	51.159	50.338	49.503	48.653	47.787	46.906	46.012	45.103
25	56.435	55.730	55.007	54.267	53.511	52.739	51.950	51.145	50.325	49.489	48.638	47.772	46.891	45.997	45.088
26	56.424	55.718	54.995	54.255	53.498	52.726	51.936	51.132	50.311	49.475	48.623	47.758	46.877	45.982	45.073
27	56.412	55.706	54.983	54.242	53.486	52.713	51.923	51.118	50.297	49.461	48.609	47.743	46.862	45.967	45.057
28	56.401	55.694	54.970	54.230	53.473	52.700	51.910	51.104	50.283	49.447	48.595	47.729	46.847	45.952	45.042
29	56.389	55.682	54.958	54.217	53.460	52.687	51.897	51.091	50.270	49.433	48.581	47.714	46.832	45.937	45.026

30	56.378	55.671	54.946	54.205	53.448	52.674	51.883	51.077	50.256	49.419	48.567	47.699	46.818	45.922	45.011
31	56.366	55.659	54.934	54.192	53.435	52.661	51.870	51.064	50.242	49.405	48.552	47.685	46.803	45.906	44.996
32	56.354	55.647	54.922	54.180	53.422	52.648	51.857	51.050	50.228	49.391	48.538	47.671	46.788	45.891	44.981
33	56.343	55.635	54.909	54.167	53.409	52.635	51.843	51.036	50.214	49.377	48.524	47.656	46.773	45.876	44.965
34	56.331	55.623	54.897	54.155	53.396	52.622	51.830	51.023	50.200	49.362	48.509	47.641	46.759	45.861	44.950
35	56.319	55.611	54.885	54.142	53.384	52.608	51.817	51.010	50.186	49.348	48.494	47.627	46.744	45.846	44.935
36	56.308	55.599	54.872	54.130	53.371	52.595	51.804	50.996	50.173	49.334	48.480	47.612	46.729	45.831	44.920
37	56.296	55.587	54.861	54.117	53.358	52.582	51.790	50.982	50.159	49.320	48.466	47.597	46.714	45.816	44.904
38	56.284	55.575	54.848	54.104	53.345	52.569	51.777	50.968	50.145	49.306	48.452	47.583	46.699	45.801	44.889
39	56.273	55.563	54.836	54.092	53.332	52.556	51.763	50.955	50.131	49.292	48.437	47.568	46.684	45.786	44.874
40	56.261	55.551	54.824	54.080	53.320	52.543	51.750	50.942	50.117	49.277	48.423	47.553	46.669	45.771	44.858
41	56.249	55.539	54.811	54.067	53.307	52.530	51.736	50.928	50.103	49.263	48.409	47.539	46.654	45.756	44.843
42	56.238	55.527	54.799	54.054	53.294	52.517	51.723	50.914	50.089	49.249	48.395	47.524	46.639	45.741	44.827
43	56.226	55.515	54.787	54.042	53.281	52.504	51.710	50.901	50.076	49.235	48.380	47.509	46.624	45.726	44.812
44	56.214	55.503	54.775	54.030	53.268	52.491	51.697	50.887	50.062	49.221	48.365	47.495	46.609	45.710	44.797
45	56.202	55.491	54.762	54.017	53,255	52.478	51.684	50.873	50.048	49.207	48.351	47.480	46.595	45.695	44.782
46	56.191	55.479	54.750	54.005	53.243	52.465	51.670	50.860	50.034	49.193	48.336	47.465	46.580	45.680	44.766
47	56.179	55.467	54.738	53.992	53.230	52.452	51.657	50.846	50.020	49.179	48.322	47.451	46.565	45.665	44.751
48	56.167	55.455	54.726	53.979	53.217	52.438	51.643	50.833	50.006	49.165	48.308	47.436	46.551	45.650	44.736
49	56.156	55.443	54.713	53.967	53.204	52.425	51.630	50.819	49.992	49.151	48.293	47.421	46.536	45.635	44.720
50	56.144	55.431	54.701	53.955	53.191	52.412	51.616	50.805	49.978	49.136	48.279	47.407	46.521	45.620	44.705
51	56.132	55.419	54.688	53.942	53.178	52.399	51.603	50.792	49.965	49.122	48.265	47.392	46.506	45.604	44.689
52	56.120	55.407	54.676	53.929	53.165	52.386	51.590	50.778	49.951	49.108	48.250	47.377	46.491	45.589	44.674
53	56.109	55.395	54.664	53.917	53.152	52.373	51.576	50.764	49.937	49.094	48.236	47.363	46.476	45.574	44.659
54	56.097	55.383	54.652	53.904	53.140	52.359	51.563	50.751	49.923	49.080	48.222	47.348	46.461	45.559	44.643
55	56.085	55.371	54.639	53.891	53.127	52.346	51.549	50.737	49.909	49.066	48.207	47.333	46.446	45.544	44.628
56	56.073	55.359	54.627	53.879	53.114	52.333	51.536	50.723	49.895	49.051	48.192	47.319	46.431	45.529	44.613
57	56.061	55.347	54.614	53.867	53.101	52.320	51.523	50.710	49.881	49.037	48.178	47.304	46.416	45.514	44.597
58	56.050	55.335	54.602	53.854	53.088	52.307	51.509	50.696	49.867	49.023	48.163	47.289	46.401	45.499	44.582
59	56.038	55.323	54.590	53.841	53.075	52.294	51.496	50.682	49.853	49.009	48.149	47.275	46.386	45.484	44.566

TABLE IV

(1) Channel	(2) 20 miles (IF beat)	(3) 20 miles (intermodulation)	(4) 55 miles (adjacent channel)	(5) 60 miles (oscillator)	(6) 60 miles (sound image)	(7) 75 miles (picture image)
14	22	16–19	15	21	28	29
15	23	17–20	14, 16	22	29	30
16	24	14, 18–21	15, 17	23	30	31
17	25	14–15, 19–22	16, 18	24	31	32
18	26	14–16, 20–23	17, 19	25	32	33
19	27	14–17, 21–24	18, 20	26	33	34
20	28	15–18, 22–25	19, 21	27	34	35
21	29	16–19, 23–26	20, 22	28, 14	35	36
22	30, 14	17–20, 24–27	21, 23	29, 15	36	37
23	31, 15	18–21, 25–28	22, 24	30, 16	37	38
24	32, 16	19–22, 26–29	23, 25	31, 17	38	39
25	33, 17	20–23, 27–30	24, 26	32, 18	39	40
26	34, 18	21–24, 28–31	25, 27	33, 19	40	41
27	35, 19	22–25, 29–32	26, 28	34, 20	41	42
28	36, 20	23–26, 30–33	27, 29	35, 21	42, 14	43
29	37, 21	24–27, 31–34	28, 30	36, 22	43, 15	44, 14
30	38, 22	25–28, 32–35	29, 31	37, 23	44, 16	45, 15
31	39, 23	26–29, 33–36	30, 32	38, 24	45, 17	46, 16
32	40, 24	27–30, 34–37	31, 33	39, 25	46, 18	47, 17
33	41, 25	28–31, 35–38	32, 34	40, 26	47, 19	48, 18
34	42, 26	29–32, 36–39	33, 35	41, 27	48, 20	49, 19
35	43, 27	30–33, 37–40	34, 36	42, 28	49, 21	50, 20
36	44, 28	31–34, 38–41	35, 37	43, 29	50, 22	51, 21
37	45, 29	32–35, 39–42	36, 38	44, 30	51, 23	52, 22
38	46, 30	33–36, 40–43	37, 39	45, 31	52, 24	53, 23
39	47, 31	34–37, 41–44	38, 40	46, 32	53, 25	54, 24
40	48, 32	35–38, 42–45	39, 41	47, 33	54, 26	55, 25
41	49, 33	36–39, 43–46	40, 42	48, 34	55, 27	56, 26
42	50, 34	37–40, 44–47	41, 43	49, 35	56, 28	57, 27
43	51, 35	38–41, 45–48	42, 44	50, 36	57, 29	58, 28
44	52, 36	39–42, 46–49	43, 45	51, 37	58, 30	59, 29
45	53, 37	40–43, 47–50	44, 46	52, 38	59, 31	60, 30
46	54, 38	41–44, 48–51	45, 47	53, 39	60, 32	61, 31
47	55, 39	42–45, 49–52	46, 48	54, 40	61, 33	62, 32
48	56, 40	43–46, 50–53	47, 49	55, 41	62, 34	63, 33
49	57, 41	44–47, 51–54	48, 50	56, 42	63, 35	64, 34
50	58, 42	45–48, 52–55	49, 51	57, 43	64, 36	65, 35
51	59, 43	46–49, 53–56	50, 52	58, 44	65, 37	66, 36
52	60, 44	47–50, 54–57	51, 53	59, 45	66, 38	67, 37
53	61, 45	48–51, 55–58	52, 54	60, 46	67, 39	68, 38
54	62, 46	49–52, 56–59	53, 55	61, 47	68, 40	69, 39
55	63, 47	50–53, 57–60	54, 56	62, 48	69, 41	70, 40
56	64, 48	51–54, 58–61	55, 57	63, 49	70, 42	71, 41
57	65, 49	52–55, 59–62	56, 58	64, 50	71, 43	72, 42
58	66, 50	53–56, 60–63	57, 59	65, 51	72, 44	73, 43
59	67, 51	54–57, 61–64	58, 60	66, 52	73, 45	74, 44
60	68, 52	55–58, 62–65	59, 61	67, 53	74, 46	75, 45
61	69, 53	56–59, 63–66	60, 62	68, 54	75, 47	76, 46
62	70, 54	57–60, 64–67	61, 63	69, 55	76, 48	77, 47
63	71, 55	58–61, 65–68	62, 64	70, 56	77, 49	78, 48
64	72, 56	59–62, 66–69	63, 65	71, 57	78, 50	79, 49
65	73, 57	60–63, 67–70	64, 66	72, 58	79, 51	80, 50
66	74, 58	61–64, 68–71	65, 67	73, 59	80, 52	81, 51
67	75, 59	62–65, 69–72	66, 68	74, 60	81, 53	82, 52
68	76, 60	63–66, 70–73	67, 69	75, 61	82, 54	83, 53
69	77, 61	64–67, 71–74	68, 70	76, 62	83, 55	54
70	78, 62	65–68, 72–75	69, 71	77, 63	56	55
71	79, 63	66–69, 73–76	70, 72	78, 64	57	56
72	80, 64	67–70, 74–77	71, 73	79, 65	58	57
73	81, 65	68–71, 75–78	72, 74	80, 66	59	58
74	82, 66	69–72, 76–79	73, 75	81, 67	60	59
75	83, 67	70–73, 77–80	74, 76	82, 68	61	60
76	68	71–74, 78–81	75, 77	83, 69	62	61
77	69	72–75, 79–82	76, 78	70	63	62
78	70	73–76, 80–83	77, 79	71	64	63
79	71	74–77, 81–83	78, 80	72	65	64
80	72	75–78, 82–83	79, 81	73	66	65
81	73	76–79, 83	80, 82	74	67	66
82	74	77–80	81, 83	75	68	67
83	75	78–81	82	76	69	68

NOTE: The parenthetical reference beneath the mileage figures in columns 2 through 7, inclusive, indicate, in abbreviated form, the bases for the required mileage separations. For a discussion of these bases, see the "Sixth Report and Order" of the Commission (FCC 52–294; 17 F.R. 3905, May 2, 1952). The hyphenated numbers listed in column (3) are both inclusive.

§ 73.699 Engineering charts.

This section consists of the following Figures 1–5, 5a, and 6–12, and "slider for use with Figures 9 and 10."

NOTE: The charts as reproduced herein, due to their small scale, are not to be used in connection with material submitted to the F.C.C.

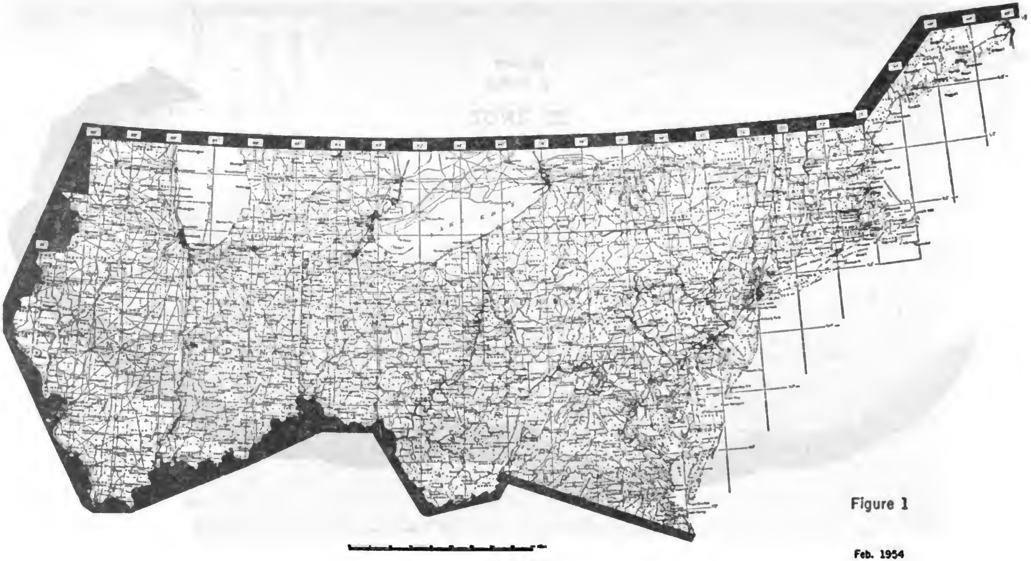
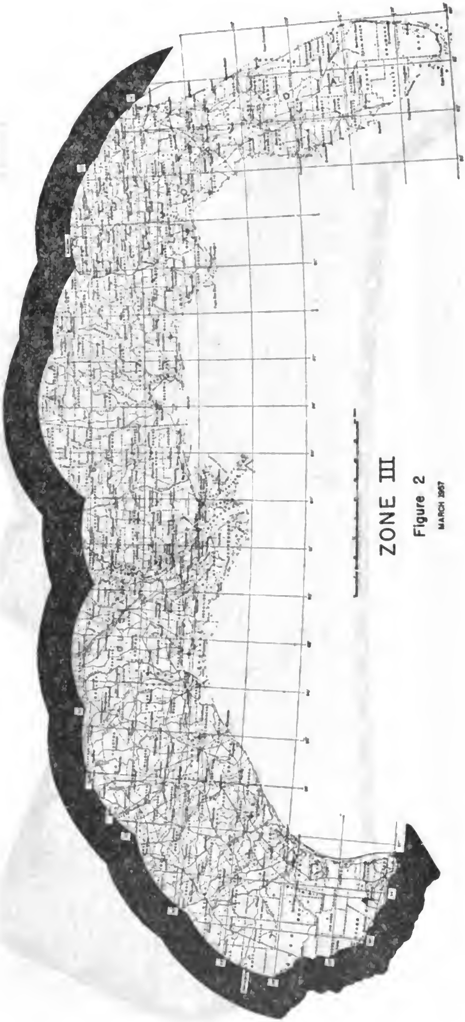


Figure 1

Feb. 1954



ZONE III

Figure 2

MARCH 1957

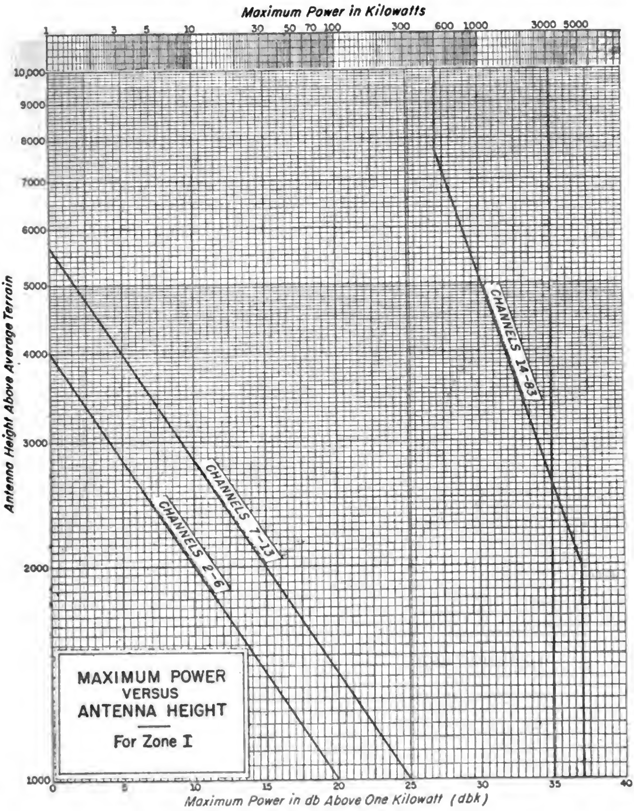

Maximum Power in Kilowatts
1
3
5
10
30
50
70
100
300
600
1000
3000
5000
10,000
9000
8000
7000
6000
5000
4000
3000
2000
1000
Antenna Height Above Average Terrain
CHANNELS 14-83
CHANNELS 7-13
CHANNELS 2-6
MAXIMUM POWER
VERSUS
ANTENNA HEIGHT
For Zone I
0
5
10
15
20
25
30
35
40
Maximum Power in db Above One Kilowatt (dbk)

Figure 3

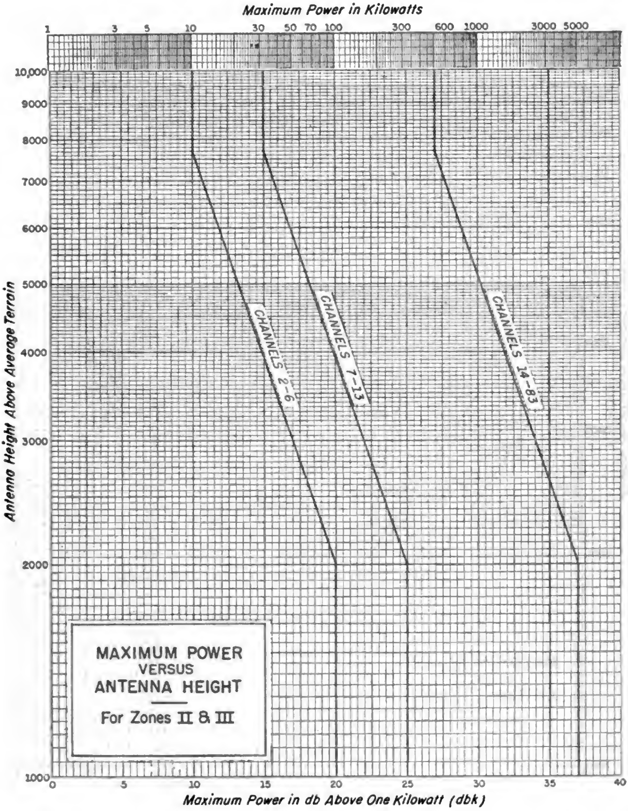
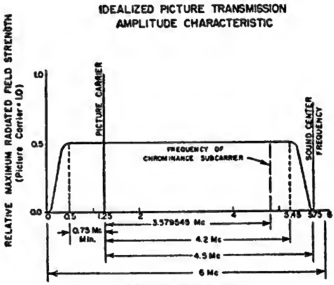

Maximum Power in Kilowatts
1
3
5
10
30
50
70
100
300
600
1000
3000
5000
10,000
9000
8000
7000
6000
5000
4000
3000
2000
1000
Antenna Height Above Average Terrain
CHANNELS 2-6
CHANNELS 7-13
CHANNELS 14-83
MAXIMUM POWER
VERSUS
ANTENNA HEIGHT
For Zones II & III
0
5
10
15
20
25
30
35
40
Maximum Power in db Above One Kilowatt (dbk)

Figure 4



Note: Not drawn to scale

FIGURE 5

IDEALIZED PICTURE TRANSMISSION
AMPLITUDE CHARACTERISTIC

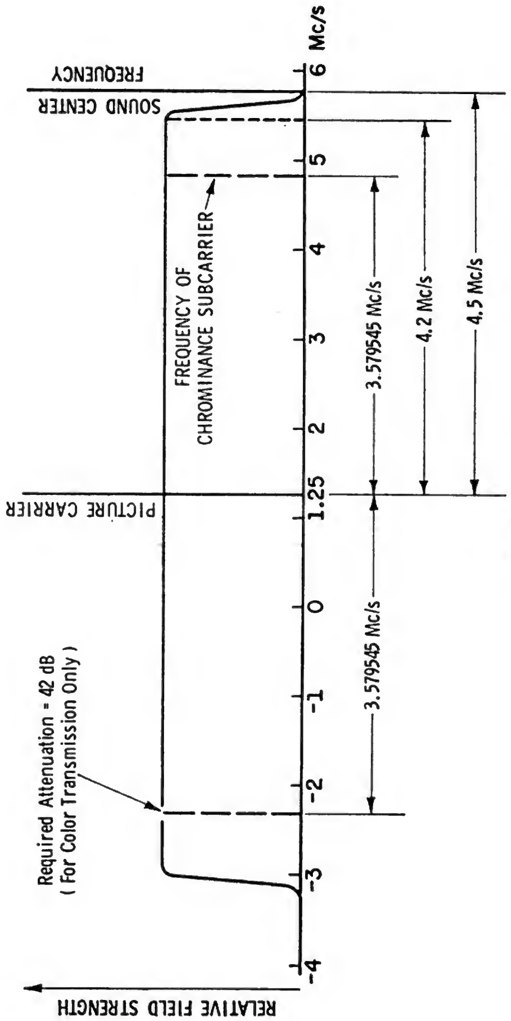
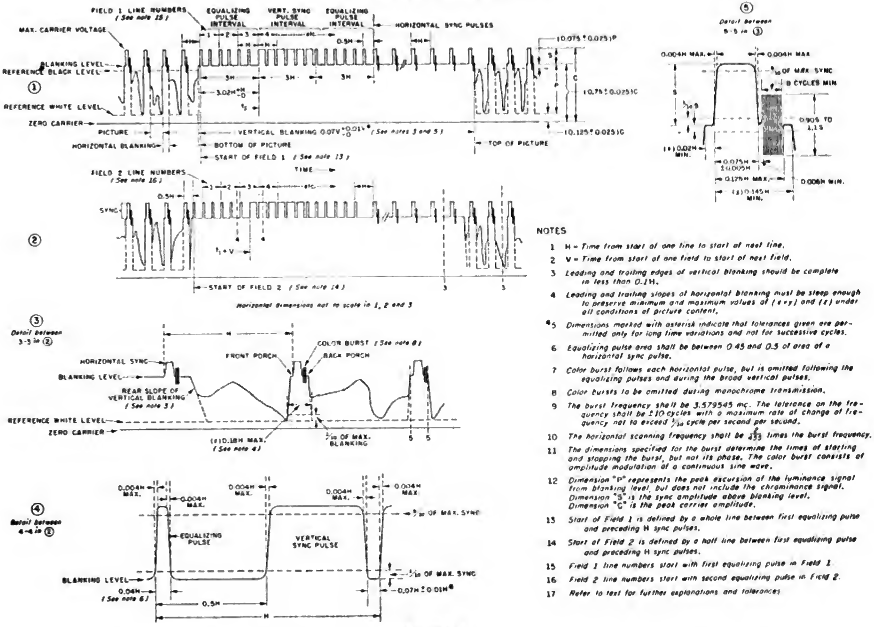


FIGURE 5(a).

TELEVISION SYNCHRONIZING WAVEFORM

FOR COLOR TRANSMISSION



NOTES

1 H = Time from start of one line to start of next line.

2 V = Time from start of one field to start of next field.

3 Leading and trailing edges of vertical blanking should be complete in less than 0.1H.

4 Leading and trailing slopes of horizontal blanking must be steep enough to preserve minimum and maximum values of (x + y) and (z) under all conditions of picture content.

*5 Dimensions marked with asterisk indicate that tolerances given are permitted only for long time variations and not for successive cycles.

6 Equalizing pulse area shall be between 0.45 and 0.5 of area of a horizontal sync pulse.

7 Color burst follows each horizontal pulse, but is omitted following the equalizing pulses and during the broad vertical pulses.

8 Color bursts to be omitted during monochrome transmission.

9 The burst frequency shall be 3.579545 mc. The tolerance on the frequency shall be ± 10 cycles with a maximum rate of change of frequency not to exceed 1/10 cycle per second per second.

10 The horizontal scanning frequency shall be $\frac{2}{455}$ times the burst frequency.

11 The dimensions specified for the burst determine the times of starting and stopping the burst, but not its phase. The color burst consists of amplitude modulation of a continuous sine wave.

12 Dimension "P" represents the peak excursion of the luminance signal from blanking level, but does not include the chrominance signal. Dimension "S" is the sync amplitude above blanking level. Dimension "C" is the peak carrier amplitude.

13 Start of Field 1 is defined by a whole line between first equalizing pulse and preceding H sync pulses.

14 Start of Field 2 is defined by a half line between first equalizing pulse and preceding H sync pulses.

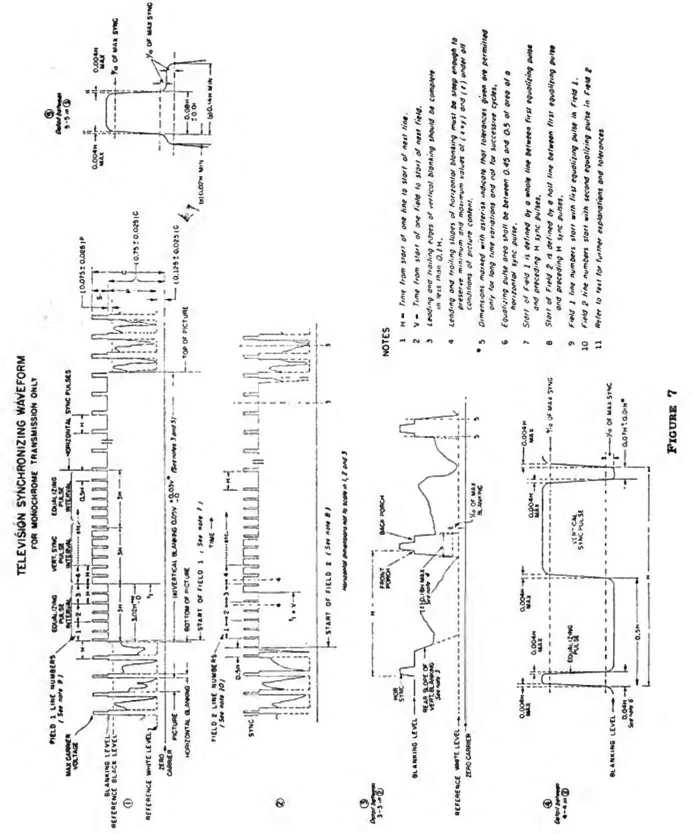
15 Field 1 line numbers start with first equalizing pulse in Field 1.

16 Field 2 line numbers start with second equalizing pulse in Field 2.

17 Refer to text for further explanations and tolerances

FIGURE 6

TELEVISION SYNCHRONIZING WAVEFORM
FOR MONOCHROME TRANSMISSION ONLY



NOTES

1 H = Time from start of one line to start of next line.
2 V = Time from start of one field to start of next field.
3 Leading and trailing edges of vertical blanking should be complete in less than 0.1 H.
4 Leading and trailing slopes of horizontal blanking must be steep enough to preserve minimum and maximum values of (x + y) and (z) under all conditions of picture content.
*5 Dimensions marked with asterisk indicate that tolerances given are permitted only for long time variations and not for successive cycles.
6 Equalizing pulse area shall be between 0.45 and 0.5 of area of a horizontal sync pulse.
7 Start of Field 1 is defined by a whole line between first equalizing pulse and preceding H sync pulses.
8 Start of Field 2 is defined by a half line between first equalizing pulse and preceding H sync pulses.
9 Field 1 line numbers start with first equalizing pulse in Field 1.
10 Field 2 line numbers start with second equalizing pulse in Field 2.
11 Refer to text for further explanations and tolerances.

FIGURE 7

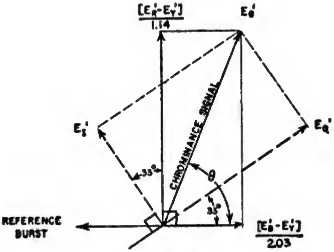
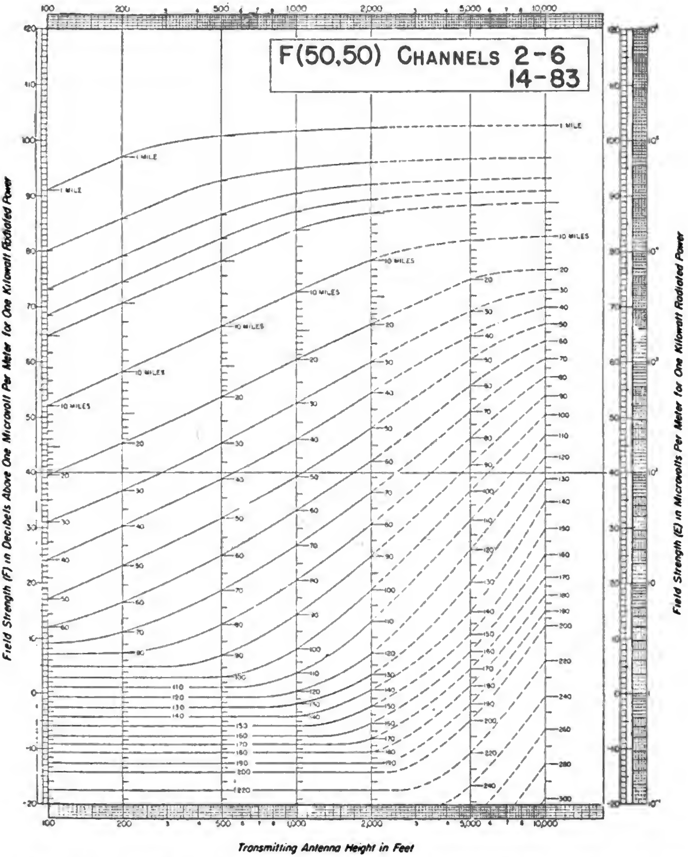
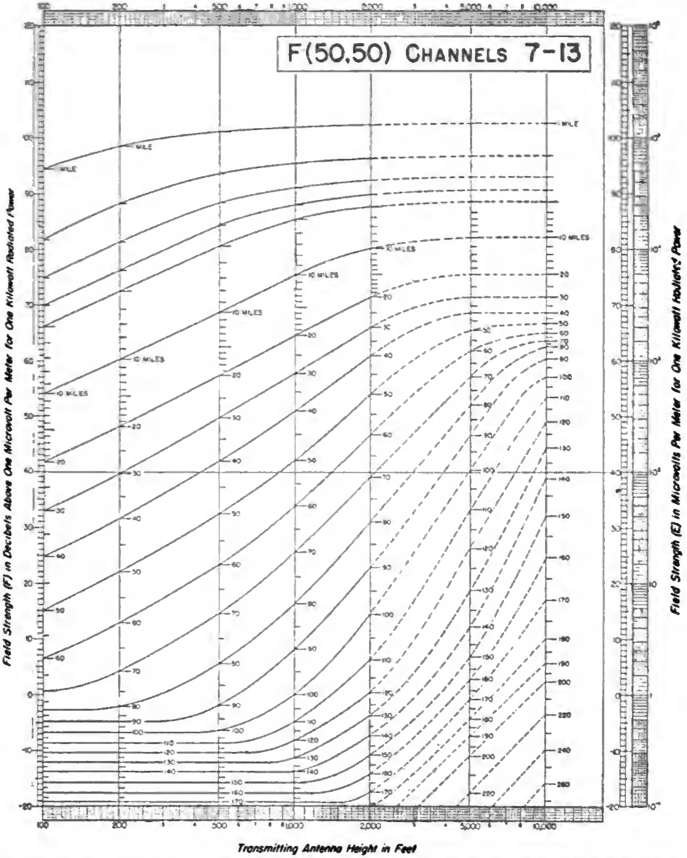

[E'R-E'Y] / 1.14
E'M
E'I
E'Q
CHROMINANCE SIGNAL
33°
θ
33°
REFERENCE BURST
[E'B-E'Y] / 2.03

FIGURE 8.



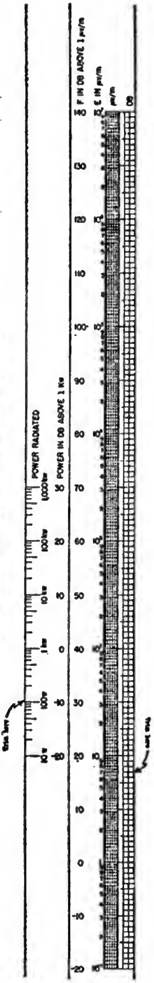
Television Channels 2–6, 14–83. Estimated field strength exceeded at 50 percent of the potential receiver locations for at least 50 percent of the time at a receiving antenna height of 30 feet.

FIGURE 9.



Television Channels 7–13. Estimated field strength exceeded at 50 percent of the potential receiver locations for at least 50 percent of the time at a receiving antenna height of 30 feet.

FIGURE 10.



Sliding scale for use with Figures 9 and 10.

ASSUMED IDEAL DETECTOR OUTPUT

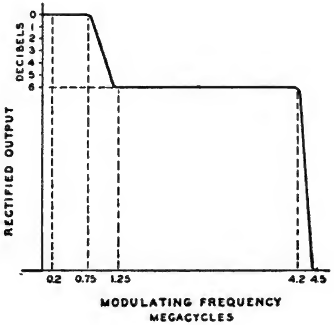


FIGURE 11.

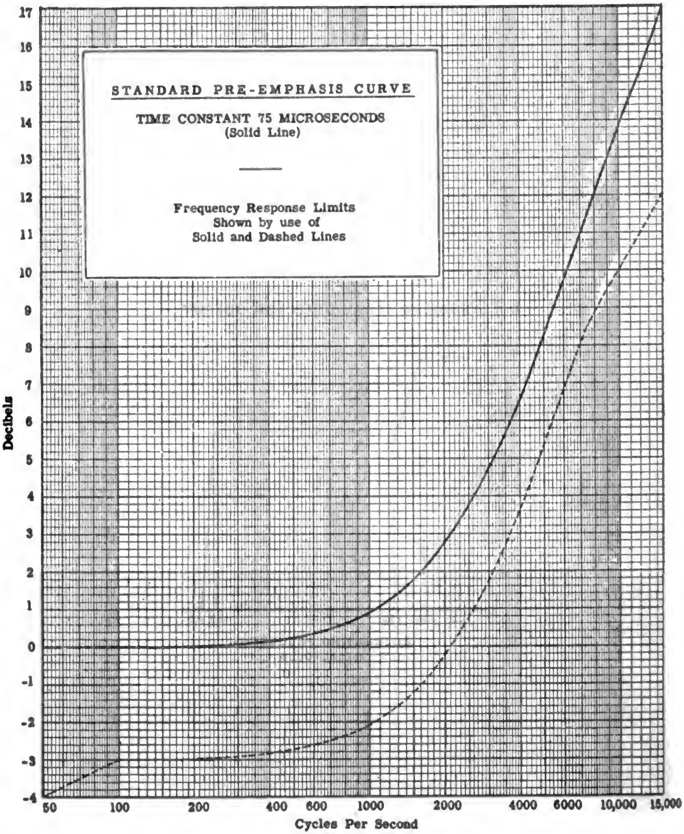
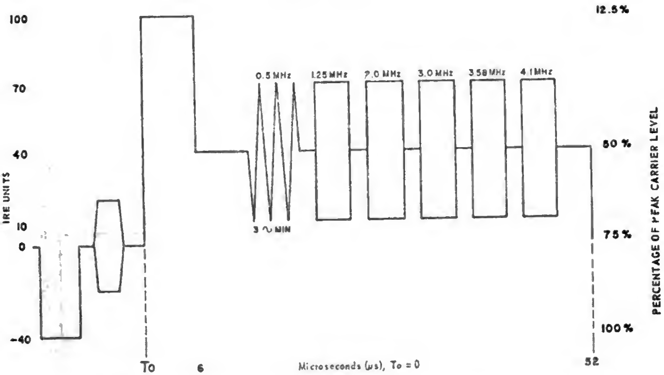

STANDARD PRE-EMPHASIS CURVE
TIME CONSTANT 75 MICROSECONDS
(Solid Line)
Frequency Response Limits
Shown by use of
Solid and Dashed Lines
Decibels
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
50
100
200
400
600
1000
2000
4000
6000
10,000
15,000
Cycles Per Second

FIGURE 12.

MULTIBURST TEST SIGNAL
(FIELD 1, LINE 18)

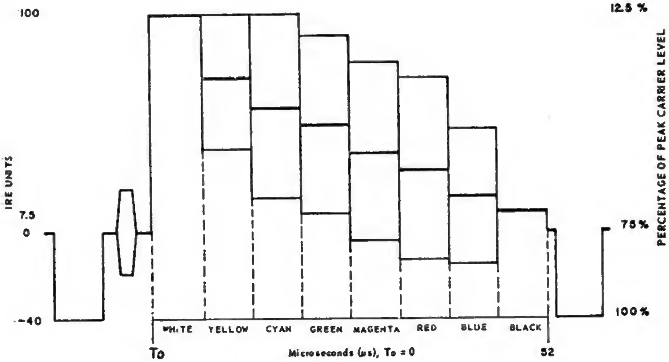


NOTES:

1. A breezeway, as shown between bursts, is recommended. Each burst = 60 IRE units peak to peak
2. T_o = Nominal start of active portion of line 18, field I
3. Rise and fall of white bar shall have risetime of not less than 0.2 μs

FIGURE 13

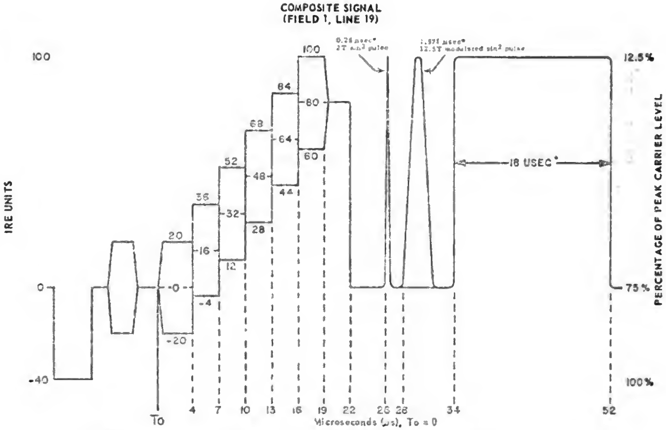
COLOR BAR TEST SIGNAL
(FIELD 2, LINE 18)



NOTE:

1. Phases and amplitudes of the colored bars are in accordance with the FCC Rules and Regulations for 100% saturated colors of 75% amplitude.
2. White flag (bar) at reference white precedes the colored bars
3. A black bar at setup level follows the colored bars
4. Each bar 6 μs minimum duration
5. T_o - Nominal start of active portion of line 18, field II

FIGURE 14



NOTES:

1. Sub-carrier of staircase in phase with burst *half amplitude duration

2. Rise and decay of all luminance signals of less than 0.2 μsec. Rise and decay of envelope of sub-carrier component of staircase signal shall be approx. sin² shaped and risetime .375 μsec.
3. To = Nominal start of active portion of line 19

FIGURE 15

[28 F.R. 13660, Dec. 14, 1963, as amended at 36 F.R. 17429, Aug. 31, 1971]

Subpart F—International Broadcast Stations

SOURCE: The provisions of this Subpart F appear at 28 F.R. 13696, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS AND ALLOCATION OF FACILITIES

§ 73.701 Definitions.

The following definitions apply to terminology employed in this subpart:

(a) *International broadcast station.* A broadcasting station employing frequencies allocated to the broadcasting service between 5950 and 26100 kc/s, whose transmissions are intended to be received directly by the general public in foreign countries.

(b) *Frequency-hour.* One frequency used for one hour.

(c) *Day.* Any twenty-four hour period beginning 0000 EST and ending 2400 EST.

(d) *Sunspot number.* The predicted 12-month running average of the number of sunspots for any month as indicated in the National Bureau of Standards CRPL Series D publications.

(e) *Vernal equinox season.* That period of any calendar year starting at 0000 EST on 1 February and ending at 2400 EST on 30 April.

(f) *Summer season.* That period of any calendar year starting at 0000 EST on 1 May and ending at 2400 EST on 31 July.

(g) *Autumnal equinox season.* That period of any calendar year starting at 0000 EST on 1 August and ending at 2400 EST on 31 October.

(h) *Winter season.* That period of any calendar year starting at 0000 EST on 1 November and ending at 2400 EST on 31 January.

(i) *Maximum usable frequency (MUF).* The highest frequency which is returned to the surface of the earth for a particular path and time of day on 50 percent of the days of the reference month.

(j) *Optimum working frequency (OWF).* The frequency which is returned to the surface of the earth for a particular path and time of day on 90 percent of the days of the reference month.

(k) *Reference month.* The middle month of any season listed in § 73.704 "Daily Frequency Hour Availability Table."

(l) *Delivered median field intensity or field intensity.* The field intensity incident upon the target area expressed in microvolts per meter, or decibels above one microvolt per meter, which is exceeded by the hourly median value on 50 percent of the days of the reference month.

(m) *Target area.* Geographic area in which the reception of particular programs is specifically intended and in which adequate broadcast coverage is contemplated.

(n) *Contract operation.* Any non-Government operation of an international broadcast station pursuant to a contract with an agency of the United States Government and subject to Governmental control as to program content, target areas to be covered, and time of broadcast.

(o) *Private operation.* Any non-Government operation of an International Broadcast station which is not contract operation.

§ 73.702 Assignment and use of frequencies.

NOTE: Paragraphs (c) through (k) do not apply to stations when engaged in contract operations as defined in § 73.701.

(a) Frequencies will be assigned by the Commission from time to time and in accordance with the provisions of this section, to authorized international broadcast stations for use at specified hours and for transmission to specified target areas. Licensees may request the assignment of specific frequencies for transmission during given hours of operation to specified target areas by filing informal requests in triplicate with the Commission no less than 15 days prior to the start of a new season. Such requests will be honored to the extent that interference and propagation conditions permit and that they are otherwise in accordance with the provisions of this section. Requests for changes in frequency or hour assignments at other times during the year or which are received less than 15 days before the start of a new season will be processed as rapidly as practical. All specific frequency authorizations will be made only on the express understanding that they are subject to immediate cancellation or change without hearing whenever the

Commission determines that interference or propagation conditions so require and that each assignment of frequency hours for a given season is unique unto itself and not subject to renewal, with the result that completely new assignments must be secured for the forthcoming season. Where a station is simultaneously engaged in both private and contract broadcasting, as defined in § 73.701, it must receive separate frequency hour authorizations for each of these operations.

(b) Any foreign standard target areas shown in Figure 1 of § 73.792 may be specified by the licensee, in which case field intensity calculations should be based on the transmission path between the corresponding reference points listed (in § 73.703. In the event a broadcast is to be directed to more than one target area in the same region, the *primary* target area should be specified and the reasons for selecting that particular target area given, with special reference to the nature and special suitability, if any, of the programming proposed. Field intensity calculations should be based on the transmission path to the standard reference point in § 73.703 for the primary target area. In the event a licensee wishes to specify target areas other than those shown in Figure 1 of § 73.792, adequate justification must be given to show that the use of standard target areas is inappropriate, with special reference given to any specialized programming proposed which appears suitable only for the nonstandard target areas designated. When nonstandard target areas are proposed, special reference points must be specified (by geographical coordinates) and reasonably chosen so as to insure complete and adequate coverage of the target areas.

(c) Frequencies assigned by the Commission will be within the following bands:

	Kilocycles
Band A	5950–6200
Band B	9500–9775
Band C	11700–11975
Band D	15100–15450
Band E	17700–17900
Band F	21450–21750
Band G	25600–26100

(d) No frequency will be assigned which would provide a Delivered Median Field Intensity, either measured or calculated, of less than 150 uv/m—50 percent or 43.5 decibels above one uv/m at the distant foreign target area. (This value of Delivered Median Field Intensity is expected to provide protection against atmospheric and industrial noise for at least 90 percent of each hour during 90 percent of the days of the month.) With each request for frequency assignment, licensees must submit computations which adequately show that this requirement would be met.

NOTE: Standard OWF propagation curves and Delivered Median Field Intensity curves for the various hours and seasons throughout the eleven year sunspot cycle have been computed for transmission paths between standard reference points listed in § 73.703 for the standard target areas shown in Figure 1 of § 73.792. These curves, which were developed and used at the Mexico City High Frequency Broadcasting Conference (1948–1949), are available at the Commission's Washington offices and may be used in calculating the propagation data which licensees are required to provide under these Rules. The methods used in computing these data are described in Chapter 7, paragraph 7.7 of the National Bureau of Standards Circular 462. In lieu of that data, and in all cases where nonstandard target areas are specified as provided in paragraph (b) of this section, licensees must develop their own propagation curves for use in computing values of OWF and Delivered Median Field Intensity for the particular transmission paths involved. In doing so, use may be made of the published propagation data of the National Bureau of Standards known as CRPL Series D, "Basic Radio Propagation Predictions", published monthly in conjunction with National Bureau of Standards Circular 465, "Instructions for the use of Basic Radio Propagation Predictions." These publications are available from the Superintendent of Documents, Washington, D.C., 20554. A typical example of a computation for a transmission path between standard target areas is from New York (Area 8) to Buenos Aires (Area 15). The Delivered Median Field Intensity for the equinox season, sunspot 5, and for the 6 Mc band for the hours 0200 to 0400 GMT is indicated by the appropriate propagation curve as 24 decibels above one microvolt per meter for 1 kw radiated power. The transmitter power output of 20 decibels (100 kw) is added. The transmitting antenna gain of 12 decibels is added. The resultant total (56 decibels) exceeds the level of 43.5 decibels required to deliver a median field intensity of 150 uv/m at the distant target area.

(e) Frequencies assigned will be as near as possible to the Optimum Working Frequency. In no case will they exceed the Maximum Usable Frequency for more than a total of 15 minutes during any period of transmission. With each request for frequency assignment, licensees must submit computations which adequately show that this requirement would be met. (See note in paragraph (d) of this section regarding methods for computation.)

(f) Not more than one frequency will be authorized for use at any one time for any one program transmission except in instances where a program is intended for reception in more than one target area and the intended target areas cannot be served by a single frequency.

(g) No authorization for use of a particular frequency will be issued which fails to provide a minimum co-channel Delivered Median Field Intensity protection ratio of 40 db to the transmissions of other broadcasting stations at the reference point in the target area being served by such stations which, in the opinion of the Commission, have priority of assignment.

(h) Authorization for use of a particular frequency will not be issued which does not provide a minimum adjacent channel Delivered Median Field Intensity protection ratio of 11 db to the transmissions of other international broadcasting stations at the reference points in the target areas being served by such stations which, in the opinion of the Commission, have priority of assignment.

(i) Any frequency authorized to an international broadcast station shall also be available for assignment to other international broadcast stations.

(j) Not more than one frequency shall be used simultaneously under the same authorization and call letter and equipment installation number designation.

(k) Subject to all other pertinent provisions of this subpart, the total maximum number of frequency-hours which will be authorized to all licensees of private international broadcast stations for private operation combined in any frequency band for any pertinent season during any one day will be those in § 73.704 less the number of frequency-hours in these bands scheduled for use by both (1) government international broadcasting stations, and (2) international broadcast stations licensed by the Commission to use frequencies in these bands for contract operations.

(l) In the event the total number of frequency hours in any band scheduled for both (1) government international broadcasting stations, and (2) international broadcast stations licensed by the Commission to use frequencies in these bands for contract operations equals or exceeds 75 percent of the frequency hour figures given in § 73.704, the maximum number of frequency-hours which will be authorized to all licensees of international broadcast stations for private operation in any frequency band for any pertinent season during any one day will be 25 percent of the frequency hours shown in § 73.704.

(m) If the requests for international broadcasting frequency-hours for private operation in any band or bands exceed those available under the terms of these Rules, in the absence of any voluntary agreement for reduction of frequency-hours requested, the Commission will designate all requests for frequency-hours in the band or bands in question for hearing. Pending such hearing the Commission will temporarily assign the available frequency-hours equally among the several applicants: *Provided, however,* That with respect to such temporary allocation:

(1) An existing license shall not, to the extent such frequency hours are available, receive less than the number of frequency-hours utilized during the preceding season or requested for the forthcoming season, whichever is lesser.

(2) Where the number of frequency-hours available for private international broadcasting during a forthcoming season are insufficient to permit existing licensees to secure a temporary allocation equal to that previously utilized or requested, whichever is lesser, the allocation shall be pro-rated among such persons in a manner which will give them a share of the available frequency-hours proportionate to that utilized in the preceding season.

(3) In any event, where an applicant's share of the available frequency hours would be more than requested, the surplus shall be divided among the remaining applicants in the manner herein prescribed.

§ 73.703 Latitude and longitude of areas used for field intensity calculations.

Area No.	Latitude degrees	Longitude degrees
1	65 N.	150 W.
2	60 N.	125 W.
3	60 N.	100 W.
4	60 N.	80 W.
5	70 N.	40 W.
6	40 N.	120 W.
7	40 N.	100 W.
8	40 N.	80 W.
9	50 N.	60 W.
10	20 N.	100 W.
11	10 N.	80 W.
12	10 S.	70 W.
13	10 S.	50 W.
14	30 S.	60 W.
15	25 S.	50 W.
16	45 S.	70 W.
17	65 N.	20 W.
18	65 N.	15 E.
19	65 N.	40 E.
20	70 N.	60 E.
21	70 N.	80 E.
22	70 N.	100 E.
23	70 N.	120 E.
24	65 N.	140 E.
25	65 N.	160 E.
26	65 N.	180 E.
27	50 N.	0°
28	50 N.	20 E.
29	50 N.	40 E.
30	50 N.	60 E.
31	50 N.	80 E.
32	50 N.	100 E.
33	50 N.	120 E.
34	55 N.	140 E.
35	55 N.	160 E.
36	40 N.	25 W.
37	30 N.	0°
38	30 N.	20 E.
39	30 N.	40 E.
40	30 N.	60 E.
41	20 N.	80 E.
42	40 N.	85 E.
43	35 N.	100 E.
44	30 N.	120 E.
45	35 N.	140 E.
46	10 N.	5 W.
47	10 N.	20 E.
48	10 N.	40 E.
49	15 N.	100 E.
50	10 N.	120 E.
51	0°	140 E.
52	10 S.	20 E.
53	10 S.	40 E.
54	5 S.	105 E.
55	15 S.	140 E.
56	20 S.	165 E.
57	30 S.	25 E.
58	25 S.	120 E.
59	35 S.	150 E.
60	40 S.	170 E.
61	20 N.	160 W.
62	20 S.	170 W.
63	20 S.	150 W.
64	15 N.	145 E.
65	10 N.	170 E.

§ 73.704 Daily frequency hour availability table.

Band	Season	Sunspot Numbers								
		0–20	20–35	35–50	50–65	65–80	80–95	95–110	110–125	125–140
Mc/s										
6	June	0	0	0	0	0	0	0	0	0
	March–September	29	21	14	7	0	0	0	0	0
	December	45	47	48	49	50				32
9	June	34	30	27	24	21	16	11	5	2
	March–September	52	42	36	31	27	23	19	12	10
	December	54	50	47	44	42	39	36	33	32
11	June	53	50	48	46	45	39	31	23	14
	March–September	47	50	52	54	55	49	40	31	24
	December	31	34	36	38	39	34	30	26	22
15	June	84	88	91	94	96	87	79	69	52
	March–September	49	54	58	61	64	47	33	21	7
	December	35	35	35	35	35	33	31	29	27
17	June	23	32	40	47	53	59	66	75	84
	March–September	23	22	22	21	20	24	29	34	39
	December	14	18	21	23	25	23	20	17	16
21	June	2	9	14	18	22	39	52	65	50
	March–September	0	9	16	22	27	36	45	56	65
	December	6	11	15	18	21	29	36	47	53
26		[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
Totals	June	196	209	220	229	237	240	239	239	238
	March–September	200	198	198	196	193	179	166	154	145
	December	185	195	202	207	212	158	153	152	181

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[1] No limit.

ADMINISTRATIVE PROCEDURE

§ 73.710 Cross reference.

See Subpart D of Part 1 of this chapter, for general requirements as to applications, filing of applications, and description of application forms, other forms and information to be filed with the Commission, the manner in which applications are processed, and provisions applying to action on applications. See § 1.1111 of Subpart G of that part for the fees to be paid in connection with applications for facilities in the service covered in this subpart.

§ 73.711 Application for international broadcast stations.

(a) If the application is for a construction permit or for modification of an existing authorization, FCC Form 309 shall be filed; if for a license, FCC Form 310 shall be filed; if for a renewal of license, FCC Form 311 shall be filed.

NOTE: Until these forms are revised, information required by these Rules and not required by the forms shall be submitted as a supplement to the application and will be considered a part thereof.

(b) Authorizations issued to international broadcast stations by the Commission will not specify the frequencies or hours of use, but will be authorizations to permit the construction or use of a particular transmitting equipment combination and related antenna systems for international broadcasting.

NOTE: Requests for the use of frequencies and frequency hours for transmissions to specific target areas should be submitted separately as provided in § 73.702.

(c) In the case of applications for authorizations to permit contract operations, as defined in § 73.701(n), the contracting agency and contract number should be indicated for each operation.

§ 73.712 Notification of filing of applications.

(a) *Radio Astronomy and Radio Research Installations*. In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, West Virginia, and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, West Virginia, an applicant for authority to construct a new international broadcast station or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39°15′ N. on the north, 78°30′ W. on the east, 37°30′ N. on the south, and 80°30′ W. on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P.O. Box #2, Green Bank, West Virginia 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the Observatory. After receipt of such applications, the Commission will allow a period of twenty (20) days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the twenty-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(b) *Location on Government land*. Applicants proposing to construct a radio station on a site located on land under the jurisdiction of the U.S. Forest Service, U.S. Department of Agriculture, or the Bureau of Land Management, U.S. Department of the Interior, must supply the information and must follow the procedure prescribed by § 1.70 of this chapter.

[28 F.R. 13696, Dec. 14, 1963, as amended at 32 F.R. 2891, Feb. 15, 1967]

§ 73.716 Equipment tests.

(a) During the process of construction of an international broadcast station, the permittee after notifying the Commission and Engineer in Charge of the radio district in which the station is located may, without further authority of the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations. No programming shall be conducted during equipment tests.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid.

(d) Inspection of a station will ordinarily be required during the equipment test period. After construction and after adjustments and measurements have been completed to show compliance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations, the permittee should notify the Engineer in Charge of the radio district in which the station is located that it is ready for inspection.

(e) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

§ 73.718 Normal license period.

All international broadcast station licenses will be issued so as to expire at the hour of 3 a.m. local time and will be issued for a normal license period of 1 year expiring November 1.

[33 F.R. 4413, Mar. 12, 1968]

LICENSING POLICIES

§ 73.731 Licensing requirements; necessary showing.

A license for an international broadcast station will be issued only after a satisfactory showing has been made in regard to the following, among others:

(a) That there is a need for the international broadcast service proposed to be rendered.

(b) That the necessary program sources are available to the applicant to render an effective international service.

(c) That directive antennas and other technical facilities will be employed to deliver maximum signals to the target area or areas for which the service is designed.

(d) That the production of the program service and the technical operation of the proposed station will be conducted by qualified persons.

(e) That the applicant is technically and financially qualified and possesses adequate technical facilities to carry forward the service proposed.

(f) That the public interest, convenience and necessity will be served through the operation of the proposed station.

EQUIPMENT

§ 73.751 Power requirement.

No international broadcast station will be authorized to install equipment or licensed for operation with a power less than 50 kilowatts.

§ 73.752 Frequency control.

The transmitter of each international broadcast station shall be equipped with automatic frequency control apparatus so designed and constructed that it is capable of maintaining the operating frequency within 0.003 percent of the assigned frequency.

§ 73.753 Antenna.

The antenna shall be so designed and operated that the signal (field intensity) toward the specific foreign country or countries served shall be at least 3.16 times the average effective signal from the station (power gain of 10).

§ 73.754 Frequency monitors.

(a) The licensee of each international broadcast station shall operate at the transmitter a frequency monitor independent of the frequency control of the transmitter.

(b) The frequency monitor shall be designed and constructed in accordance with good engineering practice and shall have an accuracy sufficient to determine that the operating frequency is within one-half of the allowed tolerance.

§ 73.755 Modulation monitors.

The licensee of each international broadcast station shall have in operation at the transmitter a modulation monitor.

§ 73.756 Required transmitter performance.

(a) The construction, installation, operation, and performance of the international broadcast transmitter system shall be in accordance with good engineering practice.

NOTE: The establishment of specific levels of attenuation for spurious emissions will be the subject of further Rule Making in Docket 10962 pending the completion of additional studies of this matter.

(b) In addition to the requirements of paragraph (a) of this section in the event spurious emissions cause harmful interference, such additional steps as may be necessary to eliminate the interference must be taken immediately by the licensee.

§ 73.757 Auxiliary transmitters.

Upon showing that a need exists for the use of auxiliary transmitters in addition to the regular transmitters of an international broadcast station, a license therefor may be issued provided that:

(a) Auxiliary transmitters may be installed either at the same location as the main transmitters or at another location.

(b) A licensed operator shall be in control whenever auxiliary transmitters are placed in operation.

(c) The auxiliary transmitters shall be maintained so that they may be put into immediate operation at any time for the following purposes:

(1) The transmission of the regular programs upon the failure of the main transmitters.

(2) The transmission of regular programs during maintenance or modification work on the main transmitter, necessitating discontinuance of its operation for a period not to exceed 5 days. (This includes the equipment changes which may be made without authority as set forth elsewhere in the rules and regulations or as authorized by the Commission by letter or by construction permit. Where such operation is required for periods in excess of 5 days, request therefor shall be in accordance with § 1.542 of this chapter.)

(3) Upon request by a duly authorized representative of the Commission.

(d) The auxiliary transmitters shall be tested at least once each week to determine that they are in proper operating condition and that they are adjusted to the proper frequency except that in the case of operation in accordance with paragraph (c) of this section during any week, the test in that week may be omitted provided the operation under paragraph (c) of this section is satisfactory. A record shall be kept of the time and result of each test. Such records shall be retained for a period of two years.

(e) The auxiliary transmitters shall be equipped with satisfactory control equipment which will enable the maintenance of the frequency emitted by the station within the limits prescribed by the regulations in this part.

(f) The operating power of an auxiliary transmitter may be less than the authorized power of the main transmitters, but in no event shall it be greater than such power.

§ 73.758 Alternate main transmitters.

The licensee of an international broadcast station may be licensed for alternate main transmitters provided that a technical need for such alternate transmitters is shown and that the following conditions are met:

(a) Both transmitters are located at the same place.

(b) Both transmitters shall have the same power rating.

(c) Both transmitters shall meet the construction, installation, operation, and performance requirements of good engineering practice.

§ 73.759 Changes in equipment and antenna system.

Licensees of international broadcast stations shall observe the following provisions with regard to changes in equipment and antenna system:

(a) No changes in equipment shall be made:

(1) That would result in the emission of signals outside of the authorized channel.

(b) Specific authority, upon filing formal application (FCC Form 309) therefor, is required for any of the following changes:

(1) Changes involving an increase or decrease in the power rating of the transmitters.

(2) A replacement of the transmitters as a whole.

(3) Change in the location of the transmitting antenna.

(4) Change in location of main studio, if it is proposed to move the main studio to a different city from that specified in the license.

(5) Change in the power delivered to the antenna.

(6) Change in frequency control and/or modulation system.

(c) Other changes, except as above provided for in this section, may be made at any time without the authority of the Commission, provided that the Commission shall be promptly notified thereof and such changes shall be shown in the next application for renewal of license.

TECHNICAL OPERATION AND OPERATORS

§ 73.761 Time of operation.

(a) All international broadcast stations will be licensed for unlimited time operation except as may be directed by the Commission from time to time. In an emergency however, when, due to causes beyond the control of the licensee, it becomes impossible to continue operation, the station may cease operation for a period not to exceed 10 days, provided that the Commission and the Engineer in Charge of the radio district in which the station is located shall be notified in writing immediately after the emergency develops.

(b) Persons desiring to enter into a voluntary sharing arrangement of an international channel may file application therefor with the Commission. Copies of the time-sharing agreement should be filed with the application.

§ 73.762 Station inspection.

The licensee of any international broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 73.763 Station license, posting of.

The original of each station license shall be posted in the transmitter room.

§ 73.764 Operator requirements.

One or more licensed radiotelephone first-class operators shall be on duty at the place where the transmitting apparatus of each station is located and in actual charge thereof whenever it is being operated. The original license (or FCC Form 759) of each station operator shall be posted at the place where he is on duty. The licensed operator on duty and in charge of an international broadcast transmitter may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and by the rules and regulations governing such stations. However, such duties shall in nowise interfere with the operation of the broadcast transmitter.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 73.765 Operating power; how determined.

The operating power, and its maintenance, of each international broadcast station shall be in conformity with good engineering practice.

§ 73.766 Modulation.

The percentage of modulation of the transmissions shall be maintained as high as possible consistent with good quality of transmission and good broadcast practice and in no case less than 50 percent nor more than 100 percent on peaks of frequent recurrence during any selection which normally is transmitted at the highest level of the program under consideration.

§ 73.767 Frequency tolerance.

The operating frequencies of international broadcast station transmitters shall at all times be maintained within the frequency tolerances specified in § 73.752.

§ 73.768 Antenna structure, marking and lighting.

The provisions of Part 17 of this chapter (Construction, Marking, and Lighting of Antenna Structures) require that certain antenna structures be painted and/or lighted in accordance with the provisions of that part. Where the antenna structure of a facility authorized under this subpart is required to be painted or lighted, see §§ 17.47 through 17.53 of this chapter.

[33 F.R. 15423, Oct. 17, 1968]

§ 73.769 Discontinuance of operation.

The licensee of each station, except stations operating in Alaska, shall notify the Engineer in Charge of the radio district in which the station is located of any of the following changes in the status of such station at least two days before such change:

(a) Temporary discontinuance of operation for a period of ten days or more;

(b) The date of resumption of operation after temporary discontinuance of operation for a period of ten days or more;

(c) Permanent discontinuance of operation.

In all cases of permanent discontinuance of operation the licensee shall, in addition to notifying the Engineer in Charge of the radio district in which the station is located of intention to discontinue operation, immediately forward the station license to the Washington, D. C., office of the Commission for cancellation.

OTHER OPERATING REQUIREMENTS

§ 73.781 Logs.

The licensee or permittee of each international broadcast station shall maintain program and operating logs in the following manner:

(a) In the program log:

(1) An entry of the time each station identification announcement (call letters and location) is made.

(2) An entry briefly describing each program broadcast, such as "music", "drama", "speech", etc., together with the name or title thereof, language, and the sponsor's name, with the time of the beginning and ending of the complete program.

(3) An entry showing, for each program of network origin, the name of the network originating the program.

(b) In the operating log:

(1) An entry of the time the station begins to supply power to the antenna, and the time it stops.

(2) An entry of the time the program begins and ends.

(3) An entry of each interruption to the carrier wave, its cause, and duration.

(4) An entry of the following each 30 minutes:

(i) Operating constants of last radio stage of the transmitter (total plate current and plate voltage).

(ii) Frequency monitor reading.

(5) A log must be kept of all experimental operation. If the entries required above are not applicable thereto, then the entries shall be made so as to fully describe the operation.

(c) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

[28 F.R. 13696, Dec. 14, 1963, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 73.782 Retention of logs.

Logs of international broadcast stations shall be retained by the licensee or permittee for a period of two years: *Provided, however,* That logs involving communications incident to a disaster or which include communications incident to or involved in an investigation by the Commission and concerning which the licensee or permittee has been notified, shall be retained by the licensee or permittee until he is specifically authorized in writing by the Commission to destroy them: *Provided, further,* That logs incident to or involved in any claim or complaint of which the licensee or permittee has notice shall be retained by the licensee or permittee until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for the filing of suits upon such claims.

§ 73.783 Logs; by whom kept.

Each log shall be kept by the person or persons competent to do so, having actual knowledge of the facts required, who shall sign the log when starting duty and again when going off duty. The logs shall be made available upon request by an authorized representative of the Commission.

§ 73.784 Log form.

The log shall be kept in an orderly manner, in suitable form, and in such detail that the data required for the particular class of station concerned are readily available. Key letters or abbreviations may be used if proper meaning or explanation is contained elsewhere in the log.

§ 73.785 Correction of logs.

No log or portion thereof shall be erased, obliterated, or willfully destroyed within the period of retention provided by the rules. Any necessary correction may be made only by the person originating the entry who shall strike out the erroneous portion, initial the correction made, and indicate the date of correction.

§ 73.786 Rough logs.

Rough logs may be transcribed into condensed form, but in such case, the original log or memoranda and all portions thereof shall be preserved and made a part of the complete log.

§ 73.787 Station identification.

(a) A licensee of an international broadcast station shall make station identification announcement (call letters and location), at the beginning and ending of each time of operation and during the operation on the hour.

(b) Station identification, program announcements, and oral continuity shall be made with international significance (language particularly) which is designed for the foreign country or countries for which the service is primarily intended.

(c) International broadcast stations shall comply with the provisions of § 73.1201 (d) and (e) relating to the avoidance of program interruption for regular station identification announcements.

[28 F.R. 13696, Dec. 14, 1963, as amended at 34 F.R. 19762, Dec. 17, 1969]

§ 73.788 Service; commercial or sponsored programs.

(a) A licensee of an international broadcast station shall render only an international broadcast service which will reflect the culture of this country and which will promote international goodwill, understanding, and cooperation. Any program solely intended for, and directed to an audience in the continental United States does not meet the requirements for this service.

(b) Such international broadcast service may include commercial or sponsored programs: *Provided*, That:

(1) Commercial program continuities give no more than the name of the sponsor of the program and the name and general character of the commodity, utility or service, or attraction advertised.

(2) In case of advertising a commodity, the commodity is regularly sold or is being promoted for sale on the open market in the foreign country or countries to which the program is directed in accordance with paragraph (c) of this section.

(3) In case of advertising an American utility or service to prospective tourists or visitors to the United States, the advertisement continuity is particularly directed to such persons in the foreign country or countries where they reside and to which the program is directed in accordance with paragraph (c) of this section.

(4) In case of advertising an international attraction (such as a world fair, resort, spa, etc.) to prospective tourists or visitors to the United States, the oral continuity concerning such attraction is consistent with the purpose and intent of this section.

(5) In case of any other type of advertising, such advertising is directed to the foreign country or countries to which the program is directed and is consistent with the purpose and intent of this section.

(c) The geographic areas to be served by international broadcast stations are the foreign standard target areas shown in Figure 1 of § 73.792, or foreign nonstandard target areas as provided in § 73.702(d), and directive antennas shall be employed to direct the transmission to these specific target areas.

(d) An international broadcast station may transmit the program of a standard broadcast station or network system: *Provided*, The conditions in paragraph (b) of this section in regard to any commercial continuities are observed and when station identifications are made, only the call letter designation of the international station is given on its assigned frequency: *And provided further*, That in the case of chain broadcasting the program is not carried simultaneously by another international station (except another station owned by the same licensee operated on a frequency in a different group to obtain continuity of signal service), the signals from which are directed to the same area. (See section 3 (p) of the Communications Act of 1934 for the definition of "chain broadcasting.")

§ 73.789 Sponsored programs, announcement of.

(a) When an international broadcast station transmits any matter for which money, services, or other valuable consideration is either directly or indirectly paid or promised to, or charged or received by, such station, the station shall broadcast an announcement that such matter is sponsored, paid for, or furnished, either in whole or in part, and by whom or on whose behalf such consideration was supplied: *Provided, however*, That "service or other valuable consideration" shall not include any service or property furnished without charge or at a nominal charge for use on, or in connection with, a broadcast unless it is so furnished in consideration for an identification in a broadcast of any person, product, service, trademark, or brand name beyond an identification which is reasonably related to the use of such service or property on the broadcast.

(b) The licensee of each international broadcast station shall exercise reasonable diligence to obtain from its employees, and from other persons with whom it deals directly in connection with any program matter for broadcast, information to enable such licensee to make the announcement required by this section.

(c) In any case where a report (concerning the providing or accepting of valuable consideration by any person for inclusion of any matter in a program intended for broadcasting) has been made to an international broadcast station, as required by section 508 of the Communications Act of 1934, as amended, of circumstances which would have required an announcement under this section had the consideration been received by such international broadcast station, an appropriate announcement shall be made by such station.

(d) In the case of any political program or any program involving the discussion of public controversial issues for which any records, transcriptions, talent, scripts, or other material or services of any kind are furnished, either directly or indirectly, to a station as an inducement to the broadcasting of such program, an announcement shall be made both at the beginning and conclusion of such program on which such material or services are used that such records, transcriptions, talent, scripts, or other material or services have been furnished to such station in connection with the broadcasting of such programs: *Provided, however,* That only one such announcement need be made in the case of any such program of 5 minutes' duration or less, which announcement may be made either at the beginning or conclusion of the program.

(e) The announcement required by this section shall fully and fairly disclose the true identity of the person or persons by whom or in whose behalf such payment is made or promised, or from whom or in whose behalf such services or other valuable consideration is received, or by whom the material or services referred to in paragraph (d) of this section are furnished. Where an agent or other person contracts or otherwise makes arrangements with a station on behalf of another, and such fact is known to the station, the announcement shall disclose the identity of the person or persons in whose behalf such agent is acting instead of the name of such agent.

(f) In the case of any program, other than a program advertising commercial products or services, which is sponsored, paid for, or furnished, either in whole or in part, or for which material or services referred to in paragraph (d) of this section are furnished, by a corporation, committee, association, or other unincorporated group, the announcement required by this section shall disclose the name of such corporation, committee, association, or other unincorporated group. In each such case the station shall require that a list of the chief executive officers or members of the executive committee or of the board of directors of the corporation, committee, association, or other unincorporated group shall be made available for public inspection at the studios or general offices of one of the international broadcast stations carrying the program in each community in which the program is broadcast. Such lists shall be kept and made available for a period of 2 years.

(g) In the case of broadcast matter advertising commercial products or services, an announcement stating the sponsor's corporate or trade name, or the name of the sponsor's product, when it is clear that the mention of the name of the product constitutes a sponsorship identification, shall be deemed sufficient for the purposes of this section and only one such announcement need be made at any time during the course of the program.

(h) Commission interpretations in connection with the foregoing rules may be found in the Commission's Public Notice entitled "Applicability of Sponsorship Identification Rules" (FCC 63-409; 28 F.R. 4732, May 10, 1963) and such supplements as are issued from time to time.

(Sec. 317, 48 Stat. 1089, as amended; 47 U.S.C. 317) [23 F.R. 13696, Dec. 14, 1963, as amended at 33 F.R. 18032, Dec. 4, 1968]

§ 73.790 Rebroadcast.

(a) The licensee of an international broadcast station may, without further authority of the Commission, rebroadcast the program of a United States standard, FM noncommercial educational, or FM broadcast station, provided the Commission is notified of the call letters of each station rebroadcast and the licensee certifies that express authority has been received from the licensee of the station originating the program. The notice and certification of consent must be given within 3 days of any single rebroadcast, but in case of the regular practice of rebroadcasting certain programs of another broadcast station several times during a license period, notice and certification of consent must be given for the ensuing license period with the application for renewal of license, or at the beginning of such rebroadcast practice if begun during a license period.

NOTE: The broadcasting of a program relayed by a remote pickup broadcast station is not considered a rebroadcast.

(b) No licensee of an international broadcast station shall rebroadcast the programs of any other class of United States radio station without written authority having first been obtained from the Commission.

(c) A licensee of an international broadcast station may authorize the rebroadcast of its programs by any station outside the limits of the North American continent without permission from the Commission: *Provided,* That the station rebroadcasting the programs cannot be received consistently in the United States.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325)

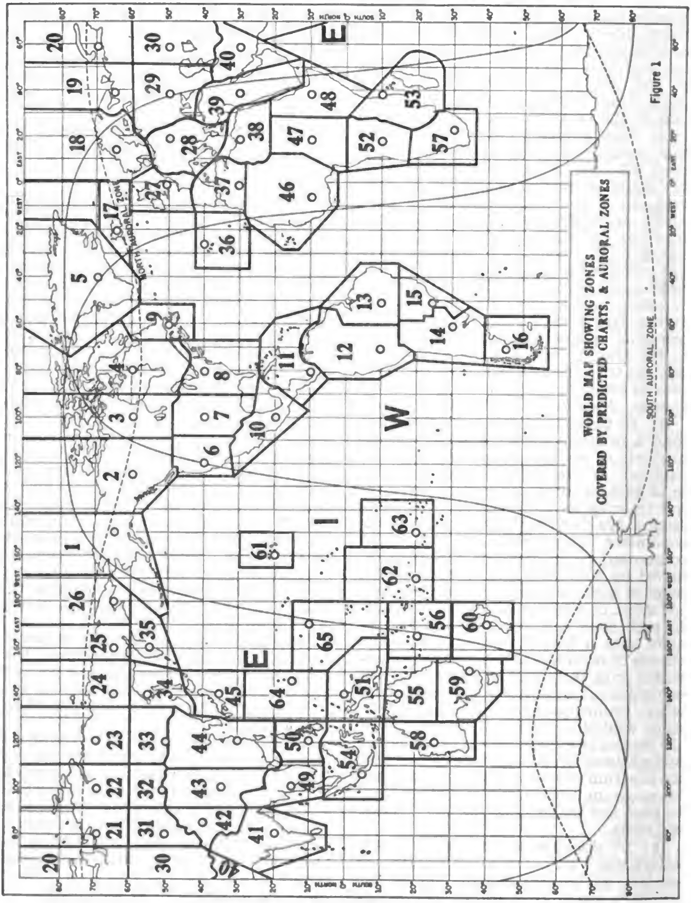
§ 73.791 Supplemental report with renewal application.

A supplemental report shall be filed with and made a part of each application for renewal of license and shall include statements of the following:

(a) The number of hours operated on each frequency, listing contract operations and private operations separately.

(b) Outline of reports of reception and interference and conclusions with regard to propagation characteristics of assigned frequencies. (If such information is not available to the applicant in the case of contract operations, a statement to this effect will be considered adequate.)

§ 73.792 Engineering chart.



§ 73.793 Equal employment opportunities.

(a) *General policy*. Equal opportunity in employment shall be afforded by all licensees or permittees of commercially or noncommercially operated standard, FM, television or international broadcast stations (as defined in this part) to all qualified persons, and no person shall be discriminated against in employment because of race, color, religion, national origin or sex.

(b) *Equal employment opportunity program*. Each station shall establish, maintain and carry out, a positive continuing program of specific practices designed to assure equal opportunity in every aspect of station employment policy and practice. Under the terms of its program, a station shall:

(1) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(2) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(3) Communicate the station's equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin or sex, and solicit their recruitment assistance on a continuing basis.

(4) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon race, color, religion, national origin or sex, from the station's personnel policies and practices and working conditions.

(5) Conduct continuing review of job structure and employment practices and adopt positive recruitment, training, job design and other measures needed in order to insure genuine equality of opportunity to participate fully in all organizational units, occupations and levels of responsibility in the station.

(c) Applicants for construction permit for a new facility, for assignment of license or construction permit or for transfer of control (other than pro forma or involuntary assignments, and transfers), and applicants for renewal of license who have not previously done so, shall file with the Commission programs designed to provide equal employment opportunities for Negroes, orientals, American Indians, Spanish-surnamed Americans, and women, or amendments to such programs. Guidelines for the preparation of such programs are set out in section VI of the appropriate application forms. See 32 FCC 2d ——. A program need not be filed by any station having less than five full-time employees or with respect to any minority group which is represented in such insignificant numbers in the area that a program would not be meaningful. In the latter situation, a statement of explanation should be filed.

(Secs. 4, 308–10, 48 Stat., as amended, 1084–1086; 47 U.S.C. 308–310) [35 F.R. 8827, June 6, 1970, as amended at 36 F.R. 25013, Dec. 28, 1971]

Subpart G—Emergency Action Notification System and the Emergency Broadcast System

Authority: The provisions of this Subpart G issued under secs. 1, 4, 303, 48 Stat., as amended, 1064, 1066, 1082; 47 U.S.C. 151, 154, 303.

Source: The provisions of this Subpart G appear at 37 F.R. 7397, Apr. 14, 1972, unless otherwise noted.

Scope and Objectives

§ 73.901 Scope of subpart.

This subpart contains the rules and regulations providing for an Emergency Action Notification System (EANS) and an Emergency Broadcast System (EBS) and applies to all broadcast stations governed by this part within any State, the District of Columbia, the Commonwealth of Puerto Rico, and the possessions of the United States, but not those stations located in the Canal Zone.

§ 73.902 Objectives of subpart.

The objectives of this subpart are to provide an expeditious means for the dissemination of Emergency Action Notifications and Emergency Action Condition Terminations to licensees and regulated services of the Federal Communications Commission, non-Government industry entities, and to the general public. Provision is also made for operation of broadcast stations subject to this part and designated non-Government and approved interconnecting systems and facilities on a voluntary organized basis during an Emergency Action Condition to provide the President and the Federal Government as well as State and Operational (local) Area authorities with an expeditious means of communicating with the general public during National, State, or Operational (local) Area situations covering a broad range of emergency contingencies posing a threat to the safety of life or property.

DEFINITIONS

§ 73.905 Emergency Action Notification System (EANS).

The system by which all licensees and regulated services of the Federal Communications Commission, participating non-Government industry entities, and the general public, are notified of the existence of or termination of an Emergency Action Condition resulting from National, State, or Operational (local) Area situations covering a broad range of emergency contingencies posing a threat to the safety of life or property. The Emergency Action Notification System consists only of the following approved and authorized facilities, systems, and interconnection arrangements: Receipt of the emergency action notification via any one is sufficient to begin emergency actions set forth in § 73.933.

(a) *First Method.* Via the internal alerting facilities of the commercial Radio and Television Broadcast Networks to all affiliates.

(b) *Second Method.* Via teletype to all standard, FM, and television broadcast and other stations subscribing to the AP and UPI Radio Wire Teletype Networks.

(c) *Third Method.* Off-the-air monitoring of specified standard, FM, and television broadcast stations by standard, FM, and television broadcast stations and other licensees and regulated services for receipt of the Emergency Action Notification. All broadcast licensees are required to install, maintain and operate radio receiving equipment for receipt of the Emergency Action Notifications and Emergency Action Condition Terminations via this method.

(d) *Fourth Method.* Off-the-air monitoring of standard, FM, and television broadcast stations by participating non-Government industry entities and the general public who are listening or viewing or whose radio or television receivers are equipped for actuation by the Attention Signal to receive the Emergency Action Notifications and Emergency Action Condition Terminations.

(e) *National-Level Interconnection Arrangements.* (1) From the White House to two specified origination points; thence via a dedicated teletype network to specified control points of the commercial Radio and Television Broadcast Networks (ABC, CBS, IMN, MBS, NBC, UPI-Audio, ABC–TV, CBS–TV, NBC–TV) and the American Telephone and Telegraph Co.; thence via the First Method specified in paragraph (a) of this section.

(2) From the White House to two specified origination points; thence via a dedicated teletype network with a dedicated automatic telephone network for backup confirmation and verification purposes; thence via the Second Method specified in paragraph (b) of this section.

(3) Via the Third Method specified in paragraph (c) of this section.

(4) Via the Fourth Method specified in paragraph (d) of this section.

(f) *State-Level Interconnection Arrangements.* From State authorities to specified State Network Primary Control Stations pursuant to the provisions of § 73.935(a)(1) via the detailed arrangements specified in the Detailed State EBS Operational Plan; thence via the Third and Fourth Methods set forth in paragraphs (c) and (d), of this section.

(g) *Operational (Local) Area-Level Interconnection Arrangements.* From Operational (Local) Area authorities to specified Primary Broadcast Stations for the Operational (Local) Area pursuant to the provisions of § 73.935(a)(2) via the detailed arrangements specified in the Detailed State EBS Operational Plan; thence via the Third and Fourth Methods set forth in paragraphs (c) and (d) of this section.

[37 F.R. 7397, Apr. 1, 1972; 37 F.R. 9220, May 6, 1972]

§ 73.906 Attention signal.

The signaling arrangement whereby standard, FM, and television broadcast stations can actuate muted receivers for the receipt of emergency cueing announcements and broadcasts, is as follows:

(a) Cut the transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(b) Return carrier to the air for 5 seconds.

(c) Cut transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(d) Return carrier to the air.

(e) Broadcast 1,000 hertz steady-state tone for 15 seconds.

NOTE: Steps in paragraphs (a) through (e) of this section, constitute the present Attention Signal. Revision of the Attention Signal is under study by a Special National Industry Advisory Committee Working Group.

§ 73.907 Emergency Action Notification.

The Emergency Action Notification is the notice to all licensees and regulated services of the Federal Communications Commission, participating non-Government industry entities, and to the general public of the existence of an Emergency Action Condition. The Emergency Action Notification is disseminated only via the Emergency Action Notification System in accordance with the Detailed non-Government Activiation and Termination Procedures and Standing Operating Procedures (SOP's) for the Emergency Broadcast System which are promulgated and issued only by the Federal Communications Commission to those non-Government entities concerned.

§ 73.908 Emergency Action Condition.

The Emergency Action Condition is a National, State, or Operational (local) Area emergency situation posing a threat to the safety of life or property covering the period of time between the transmission of an Emergency Action Notification and the transmission of the Emergency Action Condition Termination.

§ 73.909 Emergency Action Condition Termination.

The Emergency Action Condition Termination is the notice to all licensees and regulated services of the Federal Communications Commission, participating non-Government industry entities, and to the general public of the termination of an Emergency Action Condition. The Emergency Action Condition Termination is disseminated only via the Emergency Action Notification System in accordance with the Detailed non-Government Activation and Termination Procedures and Standing Operating Procedures (SOP's) for the Emergency Broadcast System which are promulgated and issued only by the Federal Communications Commission to those non-Government entities concerned.

§ 73.910 Detailed Non-Government Activation and Termination Procedures for the Emergency Broadcast System.

The Detailed Non-Government Activation and Termination Procedures for the Emergency Broadcast System prescribes the approved interconnecting circuitry details, facilities, operational arrangements and operational procedures for the Emergency Broadcast System and the origination, authentication and transmission of Emergency Action Notifications and Emergency Action Condition Terminations via the Emergency Action Notification System. Detailed actions and authentication procedures between operational elements of the Federal Government at the points of origin and specified points interconnecting with participating non-Government entities in accordance with provisions of the Basic Emergency Broadcast System (EBS) Plan are specified therein. This document is promulgated and issued only by the Federal Communications Commission to those non-Government entities concerned. (Detailed Activation and Termination Procedures between operational elements of the Federal Government will be promulgated and issued by the appropriate Government agencies involved therein.)

§ 73.911 Standing Operating Procedures (SOP's) and Authenticator Word Lists.

Standing Operating Procedures (SOP's) are documents promulgated periodically and issued by the Federal Communications Commission for use by participating non-Government industry entities specifying the detailed operational and authentication procedures for the approved interconnecting facilities for the Emergency Action Notification System and Emergency Broadcast System, as follows:

(a) *EBS SOP–1 Series.* The EBS SOP–1 Series contains detailed operational and authentication procedures for the First and Second Methods National-Level interconnecting facilities of the Emergency Action Notification System and is promulgated by the Federal Communications Commission and issued to specified non-Government control points of the nationwide commercial Radio and Television Broadcast Networks (ABC, CBS, IMN, MBS, NBC, UPI-Audio, ABC–TV, CBS–TV, NBC–TV) the American Telephone and Telegraph Co., the Associated Press (AP), and United Press International (UPI). The EBS Authenticator List (Red Envelope) issued quarterly by the Federal Communications Commission is utilized in these procedures.

(b) *EBS SOP–2 Series.* The EBS SOP–2 Series contains detailed operational and authentication procedures for the First and Second Methods of the Emergency Action Notification System and is promulgated by the Federal Communications Commission and issued to all standard, FM, and television broadcast stations subscribing to the AP and UPI Radio Wire Teletype Networks and to network affiliates. The EBS Authenticator List (Red Envelope) issued quarterly by the Federal Communications Commission and associated with the EBS Checklist is utilized in these procedures.

(c) *EBS SOP–3 Series.* The EBS SOP–3 Series contains detailed operational and authentication procedures providing a backup for the First and Second Methods National-Level interconnecting facilities of the Emergency Action Notification System and is promulgated by the Federal Communications Commission and issued to specified non-Government control points of the nationwide commercial Radio and Television Broadcast Networks, the American Telephone and Telegraph Co., Associated Press (AP), and United Press International (UPI). Authenticator Word Lists EBS (Voice) series (White Envelope) issued quarterly by the Federal Communications Commission are utilized in these procedures.

§ 73.912 Emergency Broadcast System (EBS).

The Emergency Broadcast System (EBS) is composed of facilities and personnel of non-Government broadcast stations and other authorized facilities licensed or regulated by the Federal Communications Commission and participating non-Government industry entities, including approved and authorized integral facilities or systems, arrangements, procedures, and interconnecting facilities, which have been authorized by the Federal Communications Commission to operate on a voluntary organized basis during National, State, or Operational (local) Area situations covering a broad range of emergency contingencies posing a threat to the safety of life or property for the purpose of expeditiously transmitting emergency Presidential Messages, National, State, or Operational (local) Area emergency information, emergency programing, or news to the general public.

§ 73.913 Basic Emergency Broadcast System (EBS) Plan.

The Basic Emergency Broadcast System (EBS) Plan contains, among other things, approved basic concepts and designated systems, arrangements, procedures, and interconnecting facilities to provide the requisite guidance to all non-Goverment participating elements and industry entities in the detailed development, designation and approval of facilities, mutually compatible operational arrangements, procedures, and interconnection arrangements for the expeditious dissemination on a voluntary organized basis of emergency information and instructions at the request of National, State, and Operational (local) Area authorities in addition to emergency Presidential Messages, National Programing and News during National, State, or Operational (local) Area situations covering a broad range of emergency contingencies posing a threat to the safety of life or property.

§ 73.914 Emergency Action Checklist for the Emergency Broadcast System (EBS).

The Emergency Action Checklist for the Emergency Broadcast System is a document for posting at all broadcast operating positions of standard, FM, and television broadcast stations, which specifies in summary form, the emergency actions to be taken by the station's operating personnel upon receipt of Emergency Action Notifications, Emergency Action Condition Terminations, and Tests received via the National-Level, State-Level, and Local-Level interconnecting facilities of the Emergency Broadcast System (EBS).

§ 73.915 NIAC Order.

A NIAC Order is a service order previously filed with the American Telephone and Telephone Co. providing for approved arrangements for program origination reconfiguration of the major commercial Radio and Television (aural) Broadcast Networks (except UPI Audio) voluntarily participating in the Emergency Broadcast System (EBS). Broadcast networks presently participating are American Broadcasting Co. (ABC), Columbia Broadcasting System (CBS), Mutual Broadcasting System (MBS), National Broadcasting Co. (NBC), Intermountain Network (IMN), and the United Press International Audio (UPI). Any NIAC Order must meet White House requirements and may be activated only in accordance with the Detailed Activation and Termination Procedures for the Emergency Broadcast System (EBS), and Standing Operating Procedures (SOP's).

§ 73.916 Emergency Broadcast System (EBS) Authorization.

(a) An Emergency Broadcast System (EBS) Authorization is an authorization issued by the Federal Communications Commission only to the licensees of Broadcast stations subject to the provisions of this part to permit operation of such stations, as well as associated auxiliary broadcast stations subject to Part 74 of this chapter on a voluntary organized basis during a National-level Emergency Action Condition, consistent with the provisions of this subpart and the Basic Emergency Broadcast System (EBS) Plan, including the annexes and supplements to that plan. A broadcast station licensee will be issued an Emergency Broadcast System Authorization only in accordance with the Criteria for Eligibility set forth in the Basic Emergency Broadcast System (EBS) Plan, which will remain valid concurrently with the term of the broadcast station license, so long as the station licensee continues to comply with the Criteria for Eligibility.

(b) An Emergency Broadcast System (EBS) Authorization is not required in order to participate on a voluntary organized basis in State and Operational (local) Area Emergency Broadcast System operations as set forth in § 73.935.

§ 73.917 Primary Station Emergency Broadcast System (EBS) Authorization.

A Primary Station Emergency Broadcast System (EBS) Authorization is the authorization issued to one or more broadcast station licensees in an Operational (local) Area assigning such licensees the responsibility for broadcasting a common emergency program for the initial period of, or for the duration of a National-level Emergency Action Condition. Broadcasts by such stations are intended for direct public reception in an Operational (local) Area, as specified in an approved Detailed State Emergency Broadcast System (EBS) Operational Plan.

§ 73.918 Alternate Station Emergency Broadcast System (EBS) Authorization.

An Alternate Station Emergency Broadcast System (EBS) Authorization is the authorization issued to one or more broadcast licensees in an Operational (local) Area assigning such licensees as specified alternates. An Alternate Station will assume broadcasting responsibility in accordance with the provisions of the Detailed State Emergency Broadcast System (EBS) Operational Plan during a National-level Emergency Action Condition.

§ 73.919 Primary Relay Station Emergency Broadcast System (EBS) Authorization.

A Primary Relay Station Emergency Broadcast System (EBS) Authorization is the authorization issued to one or more broadcast licensees in an Operational (local) Area assigning such licensees the function of emergency program distribution or relay service of emergency programing during a National-level Emergency Action Condition to stations holding Primary or Alternate Station Emergency Broadcast System (EBS) Authorizations, in accordance with an approved Detailed State Emergency Broadcast System (EBS) Operational Plan.

§ 73.920 Alternate Relay Station Emergency Broadcast System (EBS) Authorization.

An Alternate Relay Station Emergency Broadcast System (EBS) Authorization is the authorization issued to one or more broadcast licensees in an Operational (local) Area assigning such licensees as specified alternates to stations holding Primary Relay Emergency Broadcast System (EBS) Authorizations. In the event a Primary Relay Station is unable to assume its initial operational functions, or discontinues such operation for any reason, an Alternate Relay Station will assume those operational functions during a National-level Emergency Action Condition, in accordance with the "alternate" designations (1st, 2d, 3d, 4th, etc.) contained in the approved Detailed State Emergency Broadcast System (EBS) Operational Plan.

§ 73.921 Non-Participating Station.

A Non-Participating Station is a broadcast station which is not voluntarily participating in the Emergency Broadcast System (EBS) and does not hold an Emergency Broadcast System (EBS) Authorization. Such stations are required to discontinue operations for the duration of a National-Level Emergency Action Condition.

§ 73.922 Detailed State Emergency Broadcast System (EBS) Operational Plan.

A Detailed State Emergency Broadcast System (EBS) Operational Plan is a plan containing the designation of facilities, approved detailed mutually compatible operational arrangements, procedures, instructions, and interconnecting facilities for communicating with the general public during an Emergency Action Condition. Such a plan includes approved and authorized detailed emergency operational communications facilities, systems, procedures, and interconnecting systems. It shall be in conformity with the provisions of this subpart and the Basic Emergency Broadcast System (EBS) Plan and shall be considered a supplement thereto.

§ 73.923 Operational (local) Area.

An Operational (local) Area is a geographical area which may encompass a number of contiguous communities, as determined by the State Industry Advisory Committee and as delineated in the approved Detailed State Emergency Broadcast System (EBS) Operational Plan.

§ 73.924 Common Program Control Broadcast Station.

A Common Program Control Broadcast Station is a Primary Broadcast Station in each Operational (local) Area assigned the responsibility for coordinating the operations for the broadcasting of the common program for the Operational (local) Area. In the event a Common Program Control Broadcast Station is unable for any reason to carry out this responsibility, other Primary and Alternate Broadcast Stations in the Operational (local) Area will be assigned as the Common Program Control Broadcast Station in progressive order, as set forth in the approved Detailed State Emergency Broadcast System (EBS) Operational Plan.

§ 73.925 Emergency Broadcast System (EBS) Programing Priorities.

(a) Program priorities for the Emergency Broadcast System (EBS) are as follows:

Priority One—Presidential Messages.
Priority Two—State Programing.
Priority Three—Operational Area (Local) Programing.
Priority Four—National Programing and News.

(b) The Common Program Control Broadcast Station is responsible for coordinating the operations of the participating stations in the Operational (Local) Area in the broadcast of a common program for the Operational (Local) Area in accordance with the program priorities set forth in paragraph (a) of this section.

(c) All authorized participating stations that remain on the air in accordance with the Basic Emergency Broadcast System (EBS) Plan and the Detailed State Emergency Broadcast System (EBS) Operational Plan must carry Presidential Messages "live" at time of transmission.

(d) The nationwide commercial Radio and Television (aural) Broadcast Network program distribution facilities shall be reserved exclusively for the distribution of Presidential Messages (Priority One) and National Programing and News (Priority Four). National Programing and News which is not broadcast at the time of original transmission shall be recorded locally by the Common Program Control Broadcast Station for broadcast at the earliest opportunity consistent with Operational (Local) Area requirements.

PARTICIPATION

§ 73.926 Participation in the Emergency Broadcast System (EBS).

(a) Any licensee desiring to participate voluntarily in the National-Level Emergency Broadcast System (EBS) must prepare in narrative form an application directed to the establishment of eligibility based upon the criteria set forth in the Basic Emergency Broadcast System (EBS) Plan. The Federal Communications Commission may then issue Authorization to the licensee authorizing participation in the Emergency Broadcast System (EBS) consistent with the provisions of the approved Detailed State Emergency Broadcast System (EBS) Operational Plans.

(b) Any station participating in the National-Level Emergency Broadcast System (EBS) may withdraw from participation by giving 30 days written notice and by submitting its Emergency Authorization to the Federal Communications Commission through the appropriate FCC Regional Liaison Officer for cancellation.

(c) Any station that is denied participation in the National-Level Emergency Broadcast System (EBS) for any reason may apply to the Commission for review of the staff denial, in accordance with § 1.115 of the Federal Communications Commission rules and regulations.

(d) Any standard, FM, or television broadcast licensee may, at the discretion of management, voluntarily participate in the State-Level and Operational (Local) Area-Level Emergency Broadcast System in accordance with the provisions of the Detailed State Emergency Broadcast System (EBS) Plan. A special authorization is not required for this purpose.

NETWORK CONNECTION

§ 73.927 Participation by Communications Common Carriers.

(a) Communications Common Carriers which have facilities available in place may, without charge, connect an unaffiliated broadcast station to commercial networks operated by ABC, CBS, MBS, NBC, or IMN for the duration of an Emergency Action Condition: *Provided*, That:

(1) The station is authorized by the Federal Communications Commission to participate in the Emergency Broadcast System (EBS).

(2) The station has in service a local channel from the station studio or transmitter directly to the nearest telephone company Principal Central Office (toll test).

(b) During an Emergency Action Condition and using NIAC Orders Nos. 1 through 63, Communications Common Carriers which have facilities in place may, without charge, connect an originating source associated with an appropriate NIAC Order Number from the nearest Exchange to a selected Test Center, thence to the authorized commercial Radio and Television (aural) Broadcast Networks for the duration of the Emergency Action Condition: *Provided*, That:

(1) The originating source has in service a local channel from the originating point to the nearest Exchange.

(2) A NIAC Order covering this service is requested by the White House in accordance with the provisions of the Basic Emergency Broadcast System (EBS) Plan.

(c) Upon issuance of the Emergency Action Condition Termination, such carriers shall disconnect the unaffiliated broadcast stations and the authorized origination source and then restore the Broadcast Networks to their original configuration as individual entities.

(d) Closed circuit tests of technical program origination and distribution channels associated with NIAC Orders Nos. 1 through 63 will be conducted as provided in § 73.962. These tests are in conformance with the provision of this section.

(e) During closed circuit tests of National-Level interconnecting facilities using NIAC Orders Nos. 1 through 63, Communications Common Carriers which have facilities in place may, without charge, connect an originating source associated with an appropriate NIAC Order Number from the nearest Exchange to a selected Test Center, thence to the authorized commercial Radio Networks only for such closed circuit tests and no unaffiliated stations may be connected for the duration of the test, unless specifically authorized by the Federal Communications Commission. Upon completion of such tests the Broadcast Networks shall be restored to their original configuration as individual entities.

(f) Every such carrier rendering any such free service shall make and file, in duplicate, with the Federal Communications Commission, on or before the 31st day of July and on or before the 31st day of January in each year, reports covering the periods of 6 months ending on the 30th day of June and the 31st day of December respectively, next prior to said dates. These reports shall show in detail what free service was rendered pursuant to this rule and the charges in dollars which would have accrued to the carrier for such service rendered if charges therefor had been collected at the published tariff rates.

EMERGENCY ACTIONS

§ 73.931 Notification of Emergency Action Condition.

(a) *National-Level*. The Emergency Action Notification will be released at this level upon request of the White House and will be disseminated only via the Four Methods of the Emergency Action Notification System as set forth in § 73.905(e). Receipt of the Emergency Action Notification via any one of the four methods is sufficient notice to begin emergency actions set forth in § 73.933.

(b) *State-Level.* The management of specified State Network Primary Control Stations may, at their discretion, release the Emergency Action Notification at this level pursuant to the provisions of § 73.935(a)(1) and will be disseminated as set forth in § 73.905(f) and the Detailed State EBS Operational Plan.

(c) *Operational (Local) Area-Level.* The management of specified Primary Broadcast Stations for the Operational (Local) Area may, at their discretion, release the Emergency Action Notification at this level pursuant to § 73.935(a)(2) and will be disseminated as set forth in § 73.905(g) and the Detailed State EBS Operational Plan.

§ 73.932 Radio Monitoring Requirement.

(a) In order to insure the effectiveness of the Third Method of the Emergency Action Notification System, all broadcast station licensees must install and operate during their hours of broadcast operation, equipment capable of receiving Emergency Action Notifications or Terminations transmitted by other radio broadcast stations. This equipment must be maintained in operative condition, including arrangements for human listening watch or automatic alarm devices, and shall have its termination at each transmitter control point. However, where more than one broadcast transmitter is controlled from a common point by the same operator, only one set of equipment is required at that point.

(b) The Third Method off-the-air monitoring assignment of each standard, FM, and television broadcast station is specified in the Detailed State Emergency Broadcast System (EBS) Operational Plan.

(c) Prior to commencing routine operation or originating any emissions under program test, equipment test, experimental, or other authorizations or for any other purpose, licensees or permittees shall first ascertain whether an Emergency Action Condition exists and, if so, shall operate only in accordance with the Basic Emergency Broadcast System (EBS) Plan and Detailed State Emergency Broadcast System (EBS) Operational Plan.

§ 73.933 Emergency Broadcast System (EBS) Operation During a National-Level Emergency Action Condition.

(a) All broadcast stations are furnished complete instructions on an Emergency Action Checklist to be posted at broadcast operating positions. This Checklist summarizes the procedures to be followed by operating personnel of all broadcast stations subject to this part upon receipt of a National-Level Emergency Action Notification or Emergency Action Condition Termination. This notification may be received by one or more of the following: Receipt of the Emergency Action Notification via any one of the following is sufficient notice to begin emergency action.

(1) Via the commercial radio and television network facilities;

(2) Via the radio press wires (AP/UPI);

(3) Via off-the-air monitoring of the Primary Station for the Operational (local) Area.

(4) Via off-the-air monitoring of the Primary (FM) Relay Station for the Operational (local) Area.

(b) Immediately upon receipt of such notifications, all standard, commercial FM (including all subcarriers), and noncommercial educational FM (including all subcarriers), and television broadcast stations, including all such stations operating under equipment or program test authority, will proceed as follows:

NOTE: It is suggested that appropriate arrangements be made to tape all emergency broadcasts, including the Emergency Action Notification. Appropriate notations should also be made in the station log of all significant events as they transpire. These records should be carefully preserved in the event they are required at some later date.

(1) Immediately monitor the commercial radio and television network facilities (ABC, CBS, IMN, MBS, NBC, UPI Audio, ABC–TV, CBS–TV, NBC–TV) for any further instructions from the Network Control Point.

(2) Immediately check the Radio Press Wire (AP/UPI). Verify authenticity of message with current EBS Authenticator List (Red Envelope).

(3) Immediately monitor the radio receiving equipment tuned to a Primary Station for the Operational (Local) Area and/or to a Primary Relay (FM) Station for the State EBS Network or the Statewide leased common carrier State EBS Network for receipt of any further instructions.

(4) Discontinue normal program and broadcast the following announcement:

> We interrupt this program. This is a National Emergency. Important instructions will follow.

(5) Transmit the Emergency Action Notification Attention Signal as set forth in § 73.906 as follows:

(i) Cut the transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(ii) Return carrier to the air for 5 seconds.

(iii) Cut transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(iv) Return carrier to the air.

(v) Broadcast 1,000-hertz steady-state tone for 15 seconds.

(6) (i) "Primary Stations" will make the following announcement:

This is an Emergency Action Notification. All stations shall broadcast this Emergency Action Notification Message. This station has interrupted its regular program at the request of the White House to participate in the Emergency Broadcast System. During this emergency, some stations will remain on the air broadcasting news and official information to the public in assigned areas. This is station (call letters). We will remain on the air to serve the (operational area name) area. If you are not in this area, you should tune to other stations until you hear one broadcasting news and information for your area. You are listening to the Emergency Broadcast System serving the (operational area name) area. Do not use your telephone. The telephone lines should be kept open for official use. The Emergency Broadcast System has been activated to keep you informed. I repeat * * *. (Repeat the above announcement.)

NOTE 1: Television broadcast stations shall display the Emergency Broadcast System slide during the above transmission procedure. Those television broadcast stations holding Primary Station EBS Authorizations will continue operation and shall display the Emergency Broadcast System (EBS) or other appropriate slide during audio transmissions.

NOTE 2: Stations broadcasting in a foreign language shall repeat the above announcements in that language.

(ii) *"Primary RELAY Stations"* will make the following announcement:

This is an Emergency Action Notification. All stations shall broadcast this Emergency Action Notification Message. This station has interrupted its regular program at the request of the White House to participate in the Emergency Broadcast System. During this emergency, some stations will remain on the air broadcasting news and official information to the public in assigned areas. This is station (call letters). We will be serving as a program distribution and relay channel to other stations. For complete news and information for your area, you should now tune to other stations until you hear one broadcasting news and information for your area. This station will not be broadcasting complete news and information for your area. You should now tune until you hear a station broadcasting news and information for your area. Do not use your telephone. The telephone lines should be kept open for official use. The Emergency Broadcast System has been activated to keep you informed. I repeat * * *. (Repeat the above announcement.)

NOTE 1: Those television broadcast stations holding Primary Relay Station EBS Authorizations shall continue operation and shall display the Emergency Broadcast System (EBS) or other appropriate slide during audio transmissions.

NOTE 2: Stations broadcasting in a foreign language shall repeat the above announcements in that language.

(iii) "Alternate Stations" will make the following announcement:

This is an emergency action notification. All stations shall broadcast this emergency action notification message. This station has interrupted its regular program at the request of the White House to participate in the Emergency Broadcast System. During this emergency, some stations will remain on the air broadcasting news and official information to the public in assigned areas. This is station (call letters). We will be leaving the air. You should now tune to other stations until you hear one broadcasting emergency news and information for your area. This station will not be broadcasting news and information for your area. You should now tune until you hear a station broadcasting news and information for your area. Do not use your telephone. The telephone lines should be kept open for official use. The Emergency Broadcast System has been activated to keep you informed.

I repeat * * * (Repeat the above announcement).

NOTE 1: Television broadcast stations shall display the Emergency Broadcast System slide during the transmission procedure.

NOTE 2: Stations broadcasting in a foreign language shall repeat the above announcements in that language.

(iv) "Alternate Relay Stations" will make the following announcement:

This is an Emergency Action Notification. All stations shall broadcast this Emergency Action Notification Message. This station has interrupted its regular program at the request of the White House to participate in the Emergency Broadcast System. During this emergency, some stations will remain on the air broadcasting news and official information to the public in assigned areas. This is station (call letters). We will be leaving the air. You should now tune to other stations until you hear one broadcasting emergency news and information for your area. This station will not be broadcasting news and information for your area. You should now tune until you hear a station broadcasting news and information for your area. Do not use your telephone. The telephone lines should be kept open for official use. The Emergency Broadcast System has been activated to keep you informed.

I repeat * * * (Repeat the above announcement.)

NOTE 1: Television broadcast stations shall display the Emergency Broadcast System slide during the transmission procedures.

NOTE 2: Stations broadcasting in a foreign language shall repeat the above announcements in that language.

(v) Nonparticipating Stations will make the following announcement:

This is an Emergency Action Notification. All stations shall broadcast this Emergency Action Notification Message. This station has interrupted its regular program at the request of the White House to participate in the Emergency Broadcast System. During this emergency, some stations will remain on the air broadcasting news and official information to the public in assigned areas. This is station (call letters). We will be leaving the air. You should now tune to other stations until you hear one broadcasting emergency news and information for your area. This station will not be broadcasting news and information for your area. You should now tune until you hear a station broadcasting news and information for your area. Do not use your telephone. The telephone lines should be kept open for official use. The Emergency Broadcast System has been activated to keep you informed. I repeat * * *. (Repeat the above announcement.)

NOTE 1: Television broadcast stations shall display the Emergency Broadcast System slide during the transmission procedure.

NOTE 2: Stations broadcasting in a foreign language shall repeat the above announcements in that language.

(7) Upon completion of the above-detailed transmission procedures:

(i) Primary Stations within an Operational (local) Area will, upon cue from the Common Program Control Broadcast Station, begin broadcast of a common program. Feeds will be provided by one or more of the following:

(*a*) Common Program Control Station for the Operational (local) Area.

(*b*) Commercial Radio and Television Broadcast Networks.

(*c*) State EBS Networks (Intercity FM off-the-air relay) (Intercity leased common carrier facilities).

(*d*) Operational (local) Area Remote Pickup Broadcast Network or Primary Relay Station (FM) for the Operational (local) Area.

NOTE 1: All stations shall carry common programing until receipt of the Emergency Action Condition Termination. At this point, direct feed may be utilized from one or more of the above.

NOTE 2: Programing priorities shall be as follows:

Priority One—Presidential Message.
Priority Two—State Programing.
Priority Three—Operational Area (Local) Programing.
Priority Four—National Programing and News.

(ii) Primary Relay Stations will begin emergency program relay and distribution service in accordance with the provisions of the Basic Emergency Broadcast System (EBS) Plan and the Detailed State Emergency Broadcast System (EBS) Operational Plans.

(iii) Alternate Stations and Alternate Relay Stations within an Operational (Local) Area will now turn off their transmitters and will stand by in a state of operational readiness to begin operation to broadcast a common program upon cue from a Primary or Alternate station which is discontinuing operation for any reason, or has discontinued operation with no advance notice, consistent with the provisions of the Basic Emergency Broadcast System (EBS) Plan and the Detailed State Emergency Broadcast System (EBS) Operational Plan.

(iv) Non-Participating Stations shall discontinue operation and remove their carriers from the air for the duration of the Emergency Action Condition after completion of the Emergency Action Notification Procedures set forth in this section, above.

(8) Standby script:

(i) Upon completion of the broadcast of the Emergency Action Notification broadcast message, repeated three times, the Standby Script shall be used only by Primary Stations (or Alternate Stations if they are required to assume broadcasting responsibility) until program material is available from National, State, or Operational (Local) Area systems as set forth in your Detailed State Emergency Broadcast System (EBS) Operational Plan.

(ii) In addition, Standby Script may be used thereafter, as fill material for the common program for the Operational (Local) Area, upon cue from the Common Program Control Broadcast Station in the Operational (Local) Area.

(iii) Text of Standby Script (Use Following Emergency Action Notification Broadcast Message):

We interrupt our program at the request of the White House. This is the Emergency Broadcast System. All normal broadcasting has been discontinued during this emergency. This is station (call letters). This station will continue to broadcast, furnishing news, official information and instructions, as soon as possible, for the (operational area name) area. If you are not in the (operational area name) area tune to a station furnishing information for your area. I repeat—we interrupt our program at the request of the White House. This is the Emergency Broadcast System. All normal broadcasting has been discontinued during this emergency. This station will continue to broadcast, furnishing news, official information and instructions, as soon as possible, for the (operational area name) area. If you are not in the (operational area name) area tune to a station furnishing information for your area. Do not use your telephone, the telephone lines should be kept open for emergency official use. The Emergency Broadcast System has been activated to keep you informed. To repeat—this is station (call letters). This station will broadcast news, official information and instructions for the (operational area name) area. If you are in the (operational area name) area, keep tuned to this station for further emergency information. It is important that you listen carefully to announcements only on the station broadcasting information for your area.

NOTE: If Presidential, State, Operational (Local) Area, or National programing or News is not being received by this time, repeat Standby Script until programing is available from one of the sources specified.

(9) A station which broadcasts in a language other than English may broadcast in such foreign language with the broadcast in English.

(10) International broadcast stations will cease broadcasting immediately upon receipt of an Emergency Action Notification and will maintain radio silence.

(11) Stations in the International Broadcast Service operating under the jurisdiction of the Federal Communications Commission may under certain conditions be issued appropriate emergency authorization by the Federal Communications Commission with concurrence of the Director, Office of Emergency Preparedness, and will transmit only Federal Government broadcasts or communications. The station's carrier must be removed from the air during periods of no broadcast or communications transmissions.

(12) Stations may broadcast their call letters during an Emergency Action Condition. State and Operational Area identifications shall also be given.

(13) All stations operating and identified with a particular Operational (local) Area will broadcast a common program until receipt of the Emergency Action Condition Termination.

(14) Broadcast stations are specifically exempt from complying with § 73.52 (pertaining to maintenance of operating power) while operating under the provisions of their Emergency Authorization.

(15) All stations may resume normal broadcast operations in accordance with the provisions of their current license or program test authority upon receipt of the Emergency Action Condition Termination, which will be transmitted to all stations only via the Four Methods of the Emergency Action Notification System.

[37 F.R. 7397, Apr. 14, 1972; 37 F.R. 9220, May 6, 1972]

§ 73.934 Termination of Emergency Action Condition.

(a) Upon receipt of an Emergency Action Condition Termination, all stations operating in the Emergency Broadcast System (EBS) will broadcast the following Termination Message twice:

This concludes operations under the Emergency Broadcast System. All broadcast stations may now resume normal broadcast operation.

(b) Unlimited time stations operating in the Emergency Broadcast System (EBS) will transmit the Termination Message twice, and then resume normal operation. Daytime Only and Limited Time broadcast stations operating in the Emergency Broadcast System (EBS) shall also broadcast the Termination Message twice, then operate in accordance with their regular authorization.

DAY-TO-DAY EMERGENCY OPERATION

§ 73.935 Day-to-day emergencies posing a threat to the safety of life and property; State-Level and Operational (local) Area-Level Emergency Action Notification.

(a) A State-Level or Operational (local) Area-Level Emergency Action Notification may be transmitted for the following purposes by all standard, FM, and television broadcast stations, at their discretion, in connection with day-to-day emergency situations posing a threat to the safety of life and property:

(1) Activation of State program distribution interconnecting systems and facilities for the origination of emergency cueing announcements and broadcasts by the management of the State Network Primary Control Station in accordance with previous arrangements and agreement of the State Industry Advisory Committee in day-to-day emergency situations in the public interest. These include both situations where the time element is short, and those which develop slowly. (For example: Tornado warnings or tornado sightings; toxic gases threatening a community; flash floods; widespread fires threatening populated areas; tidal waves; earthquakes; widespread commercial electric power failures; large scale industrial explosions and fires; tornado watches, hurricane watches, and hurricane warnings; civil disorders; heavy rains—developing dangerous flood conditions; icing conditions—developing dangerous road hazards; heavy snows—developing blizzard conditions; appeals for medical assistance and facilities; appeals for emergency food and housing; call-back of off-duty police personnel; call-back of off-duty fire personnel; call-back of off-duty military personnel.)

(2) Activation of Operational (local) Area interconnecting systems and facilities for the origination of emergency cueing announcements and broadcasts by the management of the Primary Broadcast Stations for the Operational (local) Area in accordance with previous arrangements and agreement of the Operational (local) Area Industry Advisory Committee and the State Industry Advisory Committee in day-to-day emergency situations in the public interest. (Examples set forth in subparagraph (1) of this paragraph.)

(b) Stations originating emergency communications under this section shall be deemed to have conferred rebroadcast authority, as required by section 325(a) of the Communications Act, on other participating stations. Neither the notice and certification of consent called for by §§ 73.121(b), 73.291(b), 73.591(b), and 73.655(b), nor prior Commission approval as otherwise required by §§ 73.121(d), 73.291(d), 73.591(c), and 73.655(c) in the case of aural-TV cross-service rebroadcasting, is necessary under these circumstances.

§ 73.936 Emergency Broadcast System (EBS) Operation During a State-Level Emergency Action Condition.

All broadcast stations are furnished complete instructions on an Emergency Action Checklist to be posted at broadcast operating positions. This Checklist summarizes the procedures to be followed by the operating personnel of those broadcast stations subject to this part which are voluntarily participating in the State-Level Emergency Broadcast System (EBS) upon receipt of a State-Level Emergency Action Notification or Emergency Action Condition Termination. Immediately upon receipt of such Notification, all standard, commercial FM (including all subcarriers) and noncommercial educational FM (including all subcarriers), and television broadcast stations, including all such stations operating under equipment or program test authority, which are voluntarily participating in the State-Level Emergency Broadcasting System (EBS) may, at the discretion of management, proceed as set forth herein: (Operations will be conducted in accordance with the provisions of the Detailed State EBS Operational Plan. Special authorization to participate in the State-Level EBS is not required).

NOTE: It is suggested that appropriate arrangements be made to tape all emergency broadcasts, including the Emergency Action Notification. Appropriate notations should also be made in the station log of all significant events as they transpire. These records should be carefully preserved in the event they are required at some later date.

(a) Immediately monitor the radio receiving equipment tuned to a State EBS Network (Primary Relay FM Station or leased intercity common carrier facilities) for receipt of any further instructions from the State EBS Network Control Station.

(b) Immediately monitor the radio receiving equipment tuned to a Primary Station for the Operational (Local) Area for the receipt of any further instructions.

(c) Immediately check the Radio Press Wire (AP/UPI) for receipt of any further information via the State Bureau Offices of AP and UPI.

(d) At the discretion of management, discontinue normal program and broadcast the following announcement:

We interrupt this program because of a statewide emergency. Important information will follow.

(e) Transmit the Emergency Action Notification Attention Signal as set forth in § 73.906, as follows:

(1) Cut the transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(2) Return carrier to the air for 5 seconds.

(3) Cut transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(4) Return carrier to the air.

(5) Broadcast 1,000-hertz steady-state tone for 15 seconds.

NOTE: Television broadcast stations voluntarily participating in the State EBS should display the State Emergency Broadcast System or State Association of Broadcasters or other appropriate slide during the transmission procedure and the audio transmissions that follow.

(f) All broadcast stations (standard, FM, and television) voluntarily participating in the State Emergency Broadcast System (EBS) make the following announcement:

This is an Emergency Action Notification. All stations in the State of (State name) are requested to broadcast the following State-Level Emergency Action Notification Message.

This station has interrupted its regular program to participate in the (State name) Emergency Broadcast System. During this period, many stations will be broadcasting a special emergency program to the residents of the State of (State name). This station will broadcast the special emergency program beginning at (time). (Give further details—if available.)

I repeat * * * (Repeat the above announcement.)

NOTE: Television broadcast stations should display the State Emergency Broadcast System or State Association of Broadcasters slide during the transmission procedure.

NOTE: Stations broadcasting in a foreign language should repeat the above announcements in that language.

(g) Upon completion of the above transmission procedures, resume normal programing until the scheduled time for the State-Level EBS Broadcast. Upon cue from the Common Program Control Broadcast Station for your Operational (Local) Area, or Primary Relay Station for the State EBS Network, begin broadcast of a common State-Level program received from one of the following sources consistent with the provisions of the Detailed State Emergency Broadcast System (EBS) Operational Plan:

(1) Common Program Control Station for your Operational (Local) Area.

(2) State EBS Network (Intercity FM off-the-air relay) (Intercity Leased Common Carrier Facilities).

(3) Primary Relay Station (FM) for the Operational (Local) Area.

(h) All stations may resume normal broadcast operations in accordance with the provisions of their current license or program test authority upon conclusion of the State-Level EBS Broadcast.

[37 F.R. 7397, Apr. 14, 1972; 37 F.R. 9220, May 6, 1972]

§ 73.937 Emergency Broadcast System (EBS) Operation During an Operational (Local) Area-Level Emergency Action Condition.

All broadcast stations are furnished complete instructions on an Emergency Action Checklist to be posted at broadcast operating positions. This Checklist summarizes the procedures to be followed by the operating personnel of those broadcast stations subject to this part which are voluntarily participating in the Operational (Local) Area Emergency Broadcast System (EBS) upon receipt of an Operational (Local) Area-Level Emergency Action Notification or Emergency Action Condition Termination. Immediately upon receipt of such Notification, all standard, commercial FM (including all subcarriers), and noncommercial educational FM (including all subcarriers), and television broadcast stations, including all such stations operating under equipment or program test authority, which are voluntarily participating in the Operational (Local) Area Emergency Broadcast System (EBS) may, at the discretion of management, proceed as set forth herein: (Operations will be conducted in accordance with the provisions of the Detailed State EBS Operational Plan. Special authorization to participate in the Operational (Local) Area EBS is not required).

NOTE: It is suggested that appropriate arrangements be made to tape all emergency broadcasts, including the Emergency Action Notification. Appropriate notations should also be made in the station log of all significant events as they transpire. These records should be carefully preserved in the event they are required at some later date.

(a) Immediately monitor the radio receiving equipment tuned to a Primary Station for the Operational (Local) Area for receipt of any further instructions.

(b) Immediately monitor the radio receiving equipment tuned to a Primary

Relay Station (FM) serving the Operational (Local) Area for receipt of any further instructions.

(c) Immediately monitor the Emergency Remote Pickup Broadcast Network serving the Operational (Local) Area for receipt of any further instructions.

(d) Immediately check the Radio Press Wire (AP/UPI) for receipt of any further information via the State Bureau Offices of AP and UPI.

(e) At the discretion of management, discontinue normal program and broadcast the following announcement:

We interrupt this program because of a local emergency. Important information will follow.

(f) Transmit the Emergency Action Notification Attention Signal as set forth in § 73.906, as follows:

(1) Cut the transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(2) Return carrier to the air for 5 seconds.

(3) Cut transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(4) Return carrier to the air.

(5) Broadcast 1,000-hertz steady-state tone for 15 seconds.

NOTE: Television broadcast stations voluntarily participating in the Operational (Local) Areas EBS should display an Operational Area Emergency Broadcast System slide during the above transmission procedure and the audio transmissions that follow.

NOTE: Stations normally broadcasting in a foreign language should repeat the above announcements in that language.

(g) All broadcast stations (standard, FM, and television) voluntarily participating in the (operational area name) Emergency Broadcast System (EBS) may, at the discretion of management, make the following announcement:

This is an Emergency Action Notification. All stations in the (operational area name) are requested to broadcast the following Local-Level Emergency Action Notification Message.

This station has interrupted its regular program to participate in the (operational area name) Emergency Broadcast System. Many stations will be broadcasting a special emergency program to the residents of (operational area name). This station will broadcast the special emergency program beginning at (time). (Give further details—if available.)

I repeat * * * (Repeat the above announcement.)

(h) Upon completion of the above transmission procedures, resume normal programing until the scheduled time for the Local-Level EBS Broadcast. Upon cue from the Common Program Control Broadcast Station for your Operational (Local) Area, begin broadcast of a common program received from one of the following sources consistent with the provisions of the Detailed State Emergency Broadcast System (EBS) Plan:

(1) Common Program Control Station for your Operational (Local) Area.

(2) Primary Relay (FM) Station for your Operational (Local) Area.

(3) Remote Pickup Broadcast Network serving the Operational (Local) Area.

(i) All stations may resume normal broadcast operations in accordance with the provisions of their current license or program test authority upon conclusion of the Operational (local) Area EBS Broadcast.

[37 F.R. 7397, Apr. 14, 1972; 37 F.R. 9220, May 6, 1972]

TESTS

§ 73.961 Tests of the Emergency Action Notification System.

Tests of the Emergency Action Notification System will be made at regular intervals with appropriate entries in the station operating log, as follows:

(a) Test transmissions of the First Method, National-Level interconnecting facilities of the Emergency Action Notification System will be conducted on a random basis once each week or as prescribed by the White House. The test transmissions will originate on an alternate week basis from one of two specified origination points; thence via a dedicated teletype network to specified control points of the commercial Radio and Television Broadcast Networks and the American Telephone and Telegraph Co. in accordance with the test procedures set forth in the EBS Standing Operating Procedures (EBS SOP–1), copies of which are furnished to the non-Government entities involved.

(b) Test transmissions of the Second Method National-Level interconnecting facilities of the Emergency Action Notification System will be conducted on a random basis once each week or as prescribed by the White House. The test transmissions will originate on an alternate week basis from one of two specified origination points; thence via a dedicated teletype network with a dedicated automatic telephone network for backup confirmation purposes in accordance with the test procedures set forth in the EBS Standing Operating Procedures (EBS SOP-1), copies of which are furnished to the non-Government entities involved.

(c) The test transmissions set forth in (a) and (b) will be as follows:

(1) A full line of ";X's".

(2) A 10-bell alarm.

(3) The test text, as follows:

> "Testing Emergency Action Notification System—Repeat—Testing Emergency Action Notification System.
>
> "If this were not a test you would receive a message authenticator word followed by the Emergency Action Notification message. Another message would immediately follow requesting specific NIAC order arrangements and give point of program origination—and the same message authenticator word transmitted again.
>
> "Testing Emergency Action Notification System—Repeat—Testing Emergency Action Notification System.
>
> "(Date and time, Washington, D.C. time)."

(4) A full line of "X's".

(5) A 10-bell alarm.

(d) Test transmissions to standard, FM, and television broadcast stations using the Second Method of the Emergency Action Notification System and utilizing the facilities of the Associated Press (AP) and United Press International (UPI) Radio Wire Teletype Networks will be conducted once each week in accordance with the test procedures set forth in the EBS Standing Operating Procedures (EBS SOP-2), copies of which are furnished to all stations. AP and UPI will separately transmit the Test Message on a random basis once each week at times of their choice. The date and time of receipt of these test transmissions should be entered in the Station Operating Log. Weekly AP/UPI EAN test transmission:

(1) A full line of "X's."

(2) A 10-bell alarm.

(3) The test text, as follows:

> This is a test of the Emergency Action Notification System. If this were not a test, you would receive an authenticator word, an Emergency Action Notification Message, and the same authenticator word again. This is a test of the Emergency Action Notification System. All stations follow procedures on EBS Checklist for weekly teletype tests.
>
> (Date and time, Washington, D.C., time.)

(4) A full line of "X's."

(5) A 10-bell alarm.

(e) Test transmission of the Third Method of the Emergency Action Notification System will be conducted by standard, FM, and television broadcast stations once each week on a random basis between the hours of 8:30 a.m. and local sunset.

(1) Discontinue normal program and make the following announcement:

> This is a test. For the next 60 seconds this station will conduct a test of the Emergency Broadcast System. This is only a test.

(2) Transmit the Emergency Action Notification Attention Signal as set forth in § 73.906, as follows:

(i) Cut the transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(ii) Return carrier to the air for 5 seconds.

(iii) Cut transmitter carrier for 5 seconds. (Sound carrier only for TV stations.)

(iv) Return carrier to the air.

(v) Broadcast 1,000-hertz steady-state tone for 15 seconds.

(3) Broadcast the Third Method Test Message, as follows:

> This is a test of the Emergency Broadcast System. The broadcasters of your area in voluntary cooperation with the FCC and other authorities have developed this system to keep you informed in the event of a serious emergency. If this had been an actual emergency, you would have been instructed where to tune in your area[1] for news and official information. This concludes this test of the Emergency Broadcast System.

(4) Resume normal programing.

(5) The date and time of the above test transmission shall be entered in the Station Operating Log.

(f) Tests of State program distribution interconnecting systems and facilities should be conducted on a day-to-day basis as periodic broadcast operations such as State Weather Networks or State Association of Broadcasters Networks. Letters granting rebroadcast authority shall be exchanged between all participating licensees in accordance with the provisions of section 325(a) of the Communications Act of 1934, as amended, and Part 73 of this chapter.

(g) Operational (Local) Area common program distribution interconnecting systems, facilities, and procedures shall be tested on a closed circuit basis to insure emergency readiness of such interconnecting facilities in accordance with approved Detailed State Emergency Broadcast System (EBS) Operational Plans.

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[1] Television stations displaying an Operational Area map as the Emergency Broadcast System slide, may add: "As shown on this map."

[37 F.R. 7397, Apr. 14, 1972, as amended at 37 F.R. 9220, May 6, 1972]

§ 73.962 Closed Circuit Tests of Approved National-Level Interconnecting Systems and Facilities of the Emergency Broadcast System (EBS).

Tests of approved National-Level interconnecting systems, and systems and facilities of non-Government entities voluntarily participating in the Emergency Broadcast System (EBS) will be conducted not more than once a month and not less than once every 3 months only after prior FCC approval, in each instance, at a time selected by both White House and National Industry Advisory Committee (NIAC) representatives, in coordination with the Defense Commissioner, FCC, and the Chief, Emergency Communications Division, as set forth below. Appropriate entries shall be made in the station operating log.

(a) Notification of closed circuit tests of NIAC Orders 1 through 63 will be by an Emergency Action Notification System Closed Circuit Test Message (First and Second Methods) followed by a NIAC Order Mesage (addressed to AT&T and the commercial Radio Networks only—AP and UPI will not retransmit this NIAC Order Message) using the Closed Circuit Test Procedures set forth in EBS SOP–1 and SOP–2 Series.

(b) NIAC Order No. 1: National program distribution interconnecting systems and facilities will be tested on a closed circuit basis. This test will consist of a closed circuit broadcast, and due to varying program scheduling of the commercial Radio Broadcast Networks involved, the individual network facilities shall remain as separate entities. The audio networks associated with the video networks of ABC–TV, CBS–TV, or NBC–TV shall not be utilized nor are the Telephone Companies authorized to add any of the unaffiliated stations participating in the Emergency Broadcast System (EBS). The American Telephone and Telegraph Co. is authorized to interconnect the facilities of the Intermountain Networks for the duration of these closed circuit tests, then remove such interconnection. Authentication given via the National-Level interconnecting facilities of the Emergency Action Notification System will utilize the test words printed on the outside of the EBS Authenticator List (Red Envelope). The details of these closed circuit tests are set forth in Standing Operating Procedures SOP–1 and SOP–2 Series promulgated quarterly only by the Federal Communications Commission and issued only to those concerned.

(c) NIAC Orders Nos. 2 through 63: Tests of technical program origination and distribution channels will be conducted on a closed circuit basis. These test broadcasts will originate from a point selected by the White House with program feed circuitry connected to the Telephone Company Toll Test Center at points indicated for the individual NIAC Orders. These NIAC Orders authorize the American Telephone and Telegraph Co. to feed simultaneously the facilities of the nationwide commercial Radio Broadcast Networks, namely ABC, CBS, MBS, NBC, and the Intermountain (IMN) Radio Broadcast Network. These facilities may be interconnected as required by the American Telephone and Telegraph Co. The audio networks associated with the video networks of ABC–TV, CBS–TV, or NBC–TV shall not be utilized nor are the Telephone Companies authorized to add any of the unaffiliated stations participating in the Emergency Broadcast System (EBS). Authentication will be provided by the White House to the Telephone Company Toll Test Center responsible for the particular NIAC Order to be used. Authentication given via the National-Level interconnecting facilities of the Emergency Action Notification System will utilize the test words printed on the outside of the EBS Authenticator List (Red envelope). The details of these closed circuit tests are set forth in Standing Operating Procedures SOP–1 and SOP–2 Series promulgated quarterly only by the Federal Communications Commission and issued only to those concerned.

(d) Interconnection of unaffiliated broadcast stations cannot be provided on tests of NIAC Orders 1 through 63 unless authorized by the Federal Communications Commission.

(e) Test procedures:

(1) Notification of a closed circuit test will be received via the First and Second Methods of the Emergency Action Notification System only. (Do not interrupt your program and do not broadcast the closed circuit test message.)

CLOSED CIRCUIT TEST NOTIFICATION MESSAGE

This is a closed circuit test of the Emergency Broadcast System. Do not broadcast this message. Do not broadcast the audio program. The test authenticator word is ________________. This message authorizes a closed circuit test of the Emergency Broadcast System. Monitor radio network lines for closed circuit test program. All stations follow procedures on the EBS Checklist for closed circuit tests. The test authenticator word is ________________.

NOTE: Test authenticator words are printed on the outside of the EBS Authenticator List (Red Envelope) associated with the EBS Checklist.

(2) Immediately monitor your nationwide commercial radio (ABC, CBS, IMN, MBS, NBC, and UPI-Audio) network for the First Method Emergency Action Notification closed circuit test message. Television networks do not participate in the closed circuit tests.

(3) Immediately check your AP/UPI Radio Press Wire Network teletype machines for the Second Method Emergency Action Notification closed circuit test message. Verify authenticity using the Test Words printed on the outside cover of the current issue of the EBS Authenticator List (Red Envelope).

(4) Continue to monitor your nationwide commercial radio network for talkup, and the closed circuit test program.

(5) Enter the time of receipt of the closed circuit test in your station operating log.

Subpart H—Rules Applicable in Common to Broadcast Stations

SOURCE: The provisions of this Subpart H appear at 34 F.R. 19762, Dec. 17, 1969, unless otherwise noted.

SCOPE

§ 73.1001 Applicability.

(a) Except where they expressly provide otherwise, the rules in this Subpart H apply in common to all standard, FM and television broadcast stations, both commercial and noncommercial.

(b) When expressly so provided in the separate rules governing stations in other broadcast services, designated rules in this Subpart H apply also to:

International Broadcast Stations—Subpart F of this part.
Television Broadcast Translator Stations—Subpart G of Part 74 of this chapter.
Television Broadcast Booster Stations—Subpart H of Part 74 of this chapter.

(c) References in this Subpart H to "station(s)", "broadcast station(s)", "licensee(s)" or "broadcast licensee(s)" shall be construed accordingly.

(d) "Licensee" includes the holder of a construction permit.

§ 73.1201 Station identification.

(a) *When regularly required.* Broadcast stations shall announce station identification: (1) At the beginning and ending of each time of operation, and (2) regularly, during operation, within 2 minutes of each hour. Standard, FM, and noncommercial educational FM broadcast stations shall, additionally, announce station identification regularly within 2 minutes of each half hour. Television broadcast stations may make these announcements either visually or aurally.

(b) *Content.* (1) Official station identification shall consist of the station's call letters immediately followed by the name of the community or communities specified in its license as the station's location.

(2) When given specific written authorization to do so, a station may include in its official station identification the name of an additional community or communities, but the community to which the station is licensed must be named first.

(3) A licensee shall not in any identification announcements, promotional announcements or any other broadcast matter either lead to attempt to lead the station's audience to believe that the station has been authorized to identify officially with cities other than those permitted to be included in official station identifications under subparagraphs (1) and (2) of this paragraph.

NOTE: Commission interpretations of this paragraph may be found in a separate Public Notice issued Oct. 30, 1967, entitled "Examples of Application of Rule Regarding Broadcast of Statements Regarding a Station's Licensed Location." (FCC 67-1132; 10 FCC 2d 407).

(c) *Channel*—(1) *Generally.* Except as provided in subparagraph (2) of this paragraph, in making the identification announcement the call letters shall be given only on the channel of the station identified thereby.

(2) *Simultaneous AM–FM broadcasts.* If the same licensee operates an FM broadcast station and a standard broadcast station and simultaneously broad-

casts the same programs over the facilities of both such stations, station identification announcements may be made jointly for both stations for periods of such simultaneous operation. If the call letters of the FM station do not clearly reveal that it is an FM station, the joint announcement shall so identify it.

(d) *Program interruption.* Licensees shall, in general, arrange their programming so as to permit the broadcast of station identification announcements at the regular times prescribed in paragraph (a) of this section without undue disruption of program continuity. Subject to this requirement, a station identification announcement need not be presented at the time it is regularly required, if to do so would objectionably break program continuity essential to the value of the program to the audience. However, program continuity is deemed to be broken, and therefore an announcement is required, if during the 4-minute period in which an announcement is regularly due there is presented any nonprogram matter, such as commercial, public service or promotional announcements. While there may be exceptions, normally program continuity is also deemed to be broken, and an identification announcement is required, if during the 4-minute period there occurs the end of a regular period in a sports event being broadcast (e.g., round, quarter, or half-inning), the end of an act in a dramatic or variety program, the intermission of a live concert, opera, recital, or other musicial performance presented live in its entirety (presented simultaneously or by rebroadcast), or the end of any other musical selection.

(e) *Deferred station identification.* (1) If a station omits a regular station identification announcement as permitted under paragraph (d) of this section, it shall broadcast a deferred station identification announcement at the next opportunity when it cn be presented without objectionably breaking program continuity essential to the value of the program to the audience. Such opportunity is deemed to occur, at the latest, when any of the material or events mentioned in paragraph (d) of this section is presented or occurs.

(2) If no opportunity for an announcement (as defined in subparagraph (1) of this paragraph) occurs after a regular station identification is omitted, a deferred station identification shall be broadcast promptly at the end of the program unless the next regular station identification is broadcast within 5 minutes after the program ends.

(f) *Equipment performance measurements.* Station identifications falling due during equipment performance measurements may be deferred up to a quarter of an hour.

[34 F.R. 19762, Dec. 17, 1969, as amended at 36 F.R. 14314, Aug. 4, 1971]

§ 73.1205 Fraudulent billing practices.

No licensee of a standard, FM, or television broadcast station shall knowingly issue to any local, regional or national advertiser, advertising agency, station representative, manufacturer, distributor, jobber, or any other party, any bill, invoice, affidavit or other document which contains false information concerning the amount actually charged by the licensee for the broadcast advertising for which such bill, invoice, affidavit or other document is issued, or which misrepresents the nature or content of such advertising, or which misrepresents the quantity of advertising actually broadcast (number or length of advertising messages) or the time of day or date at which it was broadcast. Licensees shall exercise reasonable diligence to see that their agents and employees do not issue any documents which would violate this section if issued by the licensee.

NOTE: Commission interpretations in connection with this Rule may be found in a separate Public Notice issued May 18, 1970, entitled "Applicability of Fraudulent Billing Rule" (FCC 70-513, 35 F.R. 7906).

[35 F.R. 7900, May 22, 1970]

§ 73.1206 Broadcast of telephone conversations.

Before recording a telephone conversation for broadcast, or broadcasting such a conversation simultaneously with its occurrence, a licensee shall inform any party to the call of the licensee's intention to broadcast the conversation, except where such party is aware, or may be presumed to be aware from the circumstances of the conversation, that it is being or likely will be broadcast. Such awareness is presumed to exist only when the other party to the call is associated with the station (such as as employee or part-time reporter), or where the other party originates the call and it is obvious that it is in connection with a program in which the station customarily broadcasts telephone conversations.

[35 F.R. 7733, May 20, 1970]

PART 74—EXPERIMENTAL, AUXILIARY, AND SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES

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AUTHORITY: The provisions of this Part 74 issued under sec. 4, 303, 48 Stat. 1066, as amended, 1082, as amended; 47 U.S.C. 154, 303, unless otherwise noted. Interpret or apply secs. 301, 303, 307, 48 Stat. 1081, 1082, as amended, 1083, as amended; 47 U.S.C. 301, 303, 307.

GENERAL

§ 74.1 Services covered by this part.

(a) *Experimental and developmental broadcast.* (1) Experimental television broadcast (Subpart A).

(2) Experimental facsimile broadcast (Subpart B).

(3) Developmental broadcast (Subpart C).

(b) *Auxiliary broadcast.* (1) Remote pickup broadcast (Subpart D).

(2) Standard and FM broadcast STL and FM intercity relay (Subpart E).

(3) Television pickup (Subpart F).

(4) Television STL (Subpart F).

(5) Television inter-city relay (Subpart F).

(c) *Special broadcast.* (1) Television broadcast translator (Subpart G).

(2) Television broadcast booster (Subpart H).

(d) *Instructional television fixed* (Subpart I).

(e) *Community antenna relay stations* (Subpart J).

(f) *Community antenna television systems* (Subpart K).

[28 F.R. 13705, Dec. 14, 1963, as amended at 33 F.R. 15423, Oct. 17, 1968]

ADMINISTRATIVE PROCEDURE

§ 74.11 Cross reference.

See Subpart D of Part 1 of this chapter for general requirements as to applications, filing of applications, and description of forms; see § 1.1111 of Subpart G of that part for the fees to be paid in connection with applications for facilities in the services covered in this part; and with respect to Subpart K of this part, except where specific provision is made regarding practice and procedure, the provisions of Subpart A of Part 1 are applicable.

[32 F.R. 914, Jan. 25, 1967]

§ 74.12 Notification of filing of applications.

(a) *Radio Astronomy and Radio Research Installations.* In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, West Virginia, and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, West Virginia, an applicant for authority to construct any class of station covered in § 74.1 except remote pickup broadcast mobile and TV pickup stations, or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39°15′ N on the north, 78°30′ W on the east, 37°30′ N on the south, and 80°30′ W on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P.O. Box No. 2, Green Bank, West Virginia, 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the Observatory. After receipt of such applications, the Commission will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(b) *Location on Government land.* Applicants proposing to construct a radio station on a site located on land under the jurisdiction of the U.S. Forest Service, U.S. Department of Agriculture, or the Bureau of Land Management, U.S. Department of the Interior, must supply the information and must follow the procedure prescribed by § 1.70 of this chapter.

[28 F.R. 13705, Dec. 14, 1963, as amended at 32 F.R. 2891, Feb. 15, 1967]

§ 74.13 Equipment tests.

(a) During the process of construction of any class of radio station listed in this part, the permittee, after notifying the Commission and Engineer in Charge of the district in which the station is located, may, without further authority of the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, the rules and regulations, and the applicable engineering standards.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid.

(d) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

[28 F.R. 13705, Dec. 14, 1963]

§ 74.14 Service or program tests.

(a) Upon completion of construction of a radio station in accordance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations and applicable engineering standards, and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee of any class of station listed in this part may, without further authority of the Commission, conduct service or program tests: *Provided*, That the Engineer in Charge of the district in which the station is located and the Commission are notified at least two (2) days (not including Sundays and Saturdays and legal holidays when the offices of the Commission are not open) in advance of the beginning of such operation.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of such tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Unless sooner suspended or revoked, program test authority will continue valid during Commission consideration of the application for license and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated by final determination upon the application for station license.

(d) The authorization for tests embodied in this section shall not be construed as approval by the Commission of the application for station license.

[28 F.R. 13706, Dec. 14, 1963]

§ 74.15 License period.

(a) Licenses for the following classes of stations normally will be issued for a period of one year expiring as follows:

(1) Experimental television broadcast station: April 1.

(2) Experimental facsimile broadcast station: March 1.

(3) Developmental broadcast station: May 1.

(b) Licenses for stations in the Auxiliary Broadcast Services will be issued for a period running concurrently with the licenses of the broadcast station with which such auxiliary stations are used. A remote pickup broadcast station licensed for use with more than one broadcast station will be licensed for a period running concurrently with the license of the broadcast station having the longer license period.

(c) The license of an FM broadcast booster station will be issued for a period running concurrently with the license of the FM radio broadcast station (Primary Station) with which it is used.

(d) Initial licenses for television broadcast translator stations and FM broadcast translator stations will ordinarily be issued for a period running until the date specified in this section for the State or territory in which the station is located or, if issued after such date, to the next triennial renewal date determined in accordance with this section; and, when renewed, will normally be renewed for 3 years; *Provided, however,* That, if the Commission finds that the public interest, convenience or necessity will be served, thereby, it may issue either an initial license or a renewal thereof for a lesser term. The time of expiration of normally issued initial and renewed licenses will be 3 a.m., local time, on the following dates, and at 3-year intervals thereafter:

(1) For stations located in Nevada, February 1, 1968.

(2) For stations located in California, April 1, 1968.

(3) For stations located in Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Delaware, West Virginia, Ohio, and the District of Columbia, June 1, 1968.

(4) For stations located in Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Missouri, Kentucky, Tennessee, Indiana, Illinois, Michigan, Wisconsin, Puerto Rico, and the Virgin Islands, August 1, 1968.

(5) For stations located in Oklahoma and Texas, October 1, 1968.

(6) For stations located in Kansas and Nebraska, December 1, 1968.

(7) For stations located in Iowa and South Dakota, February 1, 1969.

(8) For stations located in Minnesota and North Dakota, April 1, 1969.

(9) For stations located in Wyoming, June 1, 1969.

(10) For stations located in Montana, August 1, 1969.

(11) For stations located in Idaho, October 1, 1969.

(12) For stations located in Washington, December 1, 1969.

(13) For stations located in Oregon, February 1, 1970.

(14) For stations located in Alaska, Hawaii and Guam, April 1, 1970.

(15) For stations located in Colorado, June 1, 1970.

(16) For stations located in New Mexico, August 1, 1970.

(17) For stations located in Utah, October 1, 1970.

(18) For stations located in Arizona, December 1, 1970.

NOTE: For the cutoff date for the filing of applications mutually exclusive with, and petitions to deny, renewal applications, see § 1.516(e) of this chapter.

(e) [Reserved]

(f) Licenses for instructional television fixed stations will be issued for a period of 5 years beginning with the date of the grant.

(g) Licenses for community antenna relay stations will be issued for a period not to exceed five years. On and after February 1, 1966, licenses for community antenna relay stations ordinarily will be issued for a period expiring on February 1, 1971, and, when regularly renewed, at five year intervals thereafter. When a license is granted subsequent to the last renewal date for the community antenna relay class of stations, the license will be issued only for the unexpired period of the current license term of such class. The license renewal date applicable to this class of stations may be varied as necessary to permit the orderly processing of renewal applications, and individual station licenses within the class may be granted or renewed for a shorter period of time than that generally prescribed for the class, if the Commission finds that public interest, convenience, and necessity would be served by such action.

[28 F.R. 13706, Dec. 14, 1963, as amended at 30 F.R. 13370, Oct. 21, 1965; 33 F.R. 4413, Mar. 12, 1968; 34 F.R. 7967, May 21, 1969; 35 F.R. 15388, Oct. 2, 1970]

§ 74.16 Temporary extension of station licenses.

Where there is pending before the Commission any application, investigation or proceeding which, after hearing, might lead to or make necessary the modification of, revocation of, or the refusal to renew an existing auxiliary or experimental broadcast station license or a television broadcast translator station license, the Commission may, in its discretion, grant a temporary extension of such license: *Provided, however,* That no such temporary extension shall be construed as a finding by the Commission that the operation of any radio station thereunder will serve public interest, convenience, and necessity beyond the express terms of such temporary extension of license: *And provided further,* That such temporary extension of license will in no wise affect or limit the action of the Commission with respect to any pending application or proceeding.

[28 F.R. 13706, Dec. 14, 1963]

SPECIAL PROVISIONS

§ 74.21 Operation during an emergency.

(a) In an emergency where normal communication facilities have been disrupted or destroyed by storms, floods or other disasters, the stations licensed under the rules of this part may be operated for the purpose of transmitting essential communications intended to alleviate distress, dispatch aid, assist in rescue operations, maintain order, or otherwise promote the safety of life and property. In the course of such operation, a station of any class may communicate with stations of other classes and in other services. However, such operation shall be conducted only on the frequency or frequencies for which the station is licensed and the power used shall not exceed the maximum power authorized in the station license. In cases where such operation involves the use of frequencies shared with other stations, licensees are expected to cooperate fully to avoid unnecessary or disruptive interference.

(b) Whenever such operation involves communications of a nature other than those for which the station is licensed to perform, the licensee shall, at the earliest practicable time, notify the Commission in Washington, D.C., and the Engineer-in-charge of the radio district in which the operation occurs, of the nature of the emergency and the use to which the station is being put and shall subsequently notify the same offices when the emergency operation has been terminated.

(c) Emergency operation undertaken pursuant to the provisions of this section shall be discontinued as soon as substantially normal communications facilities have been restored. The Commission may at any time order discontinuance of such operation.

[28 F.R. 13706, Dec. 14, 1963]

§ 74.22 Use of common antenna structure.

The simultaneous use of a common antenna structure by more than one station authorized under the rules of any subpart of this part, or by one or more such stations and one or more stations of any other class or service, may be authorized: *Provided, however,* That each permittee or licensee using such structure shall be responsible for painting and lighting of the structure when obstruction marking is required by the Commission.

[30 F.R. 11860, Sept. 16, 1965]

Subpart A—Experimental Television Broadcast Stations

SOURCE: The provisions of this Subpart A appear at 28 F.R. 13706, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 74.101 Experimental television broadcast station.

The term "experimental television broadcast station" means a station licensed for experimental transmission of transient visual images of moving or fixed objects for simultaneous reception and reproduction by the general public.

NOTE: The transmission of synchronized sound (aural broadcast) is considered an essential phase of television broadcast and one license will authorize both visual and aural broadcast.

§ 74.102 Purpose.

A license for an experimental television broadcast station will be issued for the purpose of carrying on research and experimentation for the advancement of television broadcasting which may include tests of equipment, training of personnel, and experimental programs as are necessary for the experimentation.

§ 74.103 Frequency assignment.

(a) Frequencies allocated to television broadcasting and the various categories of television auxiliary stations, in the Commission's Table of Frequency Allocations (Part 2 of this chapter), may be assigned respectively to experimental television broadcast and experimental television auxiliary stations.

(b) More than one frequency may be assigned upon a satisfactory showing of the need therefor.

(c) Frequencies best suited to the purpose of the experimentation and on which there appears to be the least likelihood of interference to established stations shall be selected.

(d) In a case of important experimentation which cannot be feasibly conducted on frequencies allocated to television broadcasting or the various categories of television auxiliary stations, the Commission may authorize an experimental television station of any class to operate on other frequencies upon a satisfactory showing of the need therefor and a showing that the proposed operation can be conducted without causing harmful interference to established services: *Provided, however,* That experimental operation which looks toward the development of radio transmitting apparatus or the rendition of any type of regular service using such frequencies will not be authorized prior to a determination by the Commission that the development of such apparatus or the rendition of such service would serve the public interest.

ADMINISTRATIVE PROCEDURE

§ 74.111 Cross reference.

See §§ 74.11 to 74.16.

§ 74.112 Supplementary statement with application for construction permit.

A supplementary statement shall be filed with and made a part of each application for construction permit for any experimental television broadcast station confirming the applicant's understanding:

(a) That all operation upon the frequency requested is for experimental purposes only.

(b) That the frequency requested may not be the best suited to the particular experimental work to be carried on.

(c) That the frequency requested need not be allocated for any service that may be developed as a result of the experimental operation.

(d) That any frequency which may be assigned is subject to change without advance notice or hearing.

(e) That any authorization issued pursuant to the application may be cancelled at any time without notice or hearing.

(Sec. 319, 48 Stat. 1089, as amended; 47 U.S.C. 319)

§ 74.113 Supplementary reports with application for renewal of license.

(a) A report shall be filed with each application for renewal of experimental television broadcast station license which shall include a statement of each of the following:

(1) Number of hours operated.

(2) Full data on research and experimentation conducted including the types of transmitting and studio equipment used and their mode of operation.

(3) Data on expense of research and operation during the period covered.

(4) Power employed, field intensity measurements and visual and aural observations and the types of instruments and receivers utilized to determine the station service area and the efficiency of the respective types of transmissions.

(5) Estimated degree of public participation in reception and the results of observations as to the effectiveness of types of transmission.

(6) Conclusions, tentative and final.

(7) Program for further developments in television broadcasting.

(8) All developments and major changes in equipment.

(9) Any other pertinent developments.

(b) Special or progress reports shall be submitted from time to time as the Commission shall direct.

(Sec. 308, 48 Stat. 1084, as amended; 47 U.S.C. 308)

LICENSING POLICIES

§ 74.131 Licensing requirements, necessary showing.

(a) An applicant for a new experimental television broadcast station, change in facilities of any existing station, or modification of license is required to make a satisfactory showing of compliance with the general requirements of the Communications Act of 1934, as amended, as well as the following:

(1) That the applicant has a definite program of research and experimentation in the technical phases of television broadcasting which indicates reasonable promise of substantial contribution to the developments of the television art.

(2) That upon the authorization of the proposed station the applicant can and will proceed immediately with its program of research and experimentation.

(3) That the transmission of signals by radio is essential to the proposed program of research and experimentation.

(4) That the program of research and experimentation will be conducted by qualified personnel.

(b) A license for an experimental television broadcast station will not authorize exclusive use of any frequency. In case interference would be caused by simultaneous operation of stations licensed experimentally, such licensees shall endeavor to arrange satisfactory time division. If such agreement cannot be reached, the Commission will determine and specify the time division.

(c) A license for an experimental television broadcast station will be issued only on the condition that no objectionable interference will result from the transmissions of the station to the regular program transmissions of television broadcast stations. It shall at all times be the duty of the licensee of an experimental television broadcast station to ascertain that no interference will result from the transmissions of its station. With regard to interference with the transmissions of an experimental television broadcast station or the experimental or test transmissions of a television broadcast station, the licensees shall make arrangements for operations to avoid interference.

§ 74.132 Power limitations.

Experimental television broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 74.133 Emission authorized.

In case emission of a different type than that specified in the license is necessary or desirable in carrying on any phases of experimentation, application setting out fully the needs shall be made by informal application.

§ 74.134 Multiple ownership.

No persons (including all persons under common control) shall control, directly or indirectly, two or more experimental television broadcast stations (other than television relay broadcast stations) unless a showing is made that the character of the programs of research requires a licensing of two or more separate stations.

EQUIPMENT

§ 74.151 Equipment changes.

The licensee of an experimental television broadcast station may make any changes in the equipment that are deemed desirable or necessary provided:

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed.

TECHNICAL OPERATION AND OPERATORS

§ 74.161 Frequency tolerance.

The licensee of an experimental television broadcasting station shall maintain the operating frequency of its station within the tolerance specified in the instrument of authorization.

§ 74.162 Frequency monitors and measurements.

The licensee of an experimental television broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

§ 74.163 Time of operation.

(a) A licensee of an experimental television broadcast station is not required to adhere to a regular schedule of operation but shall actively conduct a program of research and experimentation.

(b) The program of research and experimentation as offered by an applicant in compliance with the requirements for obtaining a license for an experimental television broadcast station shall be adhered to in the main, unless the licensee is authorized to do otherwise by the Commission.

(c) The Commission may from time to time require that a station licensed experimentally conduct such experiments as are deemed desirable and reasonable for the development of the service.

§ 74.164 Station inspection.

The licensee of each experimental television broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 74.165 Station and operator licenses; posting of.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located. However, if the station is licensed for portable-mobile operation, the station license or a photo copy thereof shall be affixed to the equipment or kept in the possession of the operator on duty at the transmitter. If a photo copy is used, the original license shall be available for inspection by an authorized Government representative.

(b) The orignal license of each station operator shall be posted at the place where he is on duty: *Provided, however,* If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, or if the station operated is licensed for portable-mobile operation, a verification card (Form 758–F) is acceptable in lieu of the posting of such license.

NOTE: The term portable-mobile as here used is intended to include any type of portable or mobile operation.

§ 74.166 Operator requirements.

One or more radio operators holding radiotelephone first-class or radiotelephone second-class operator licenses shall be on duty at the place where the transmitting apparatus of any experimental television broadcast station is located and in actual charge of its operation. The licensed operator on duty and in charge of a broadcast transmitter may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the broadcast transmitter.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.167 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter set forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

[33 F.R. 19821, Dec. 27, 1968]

§ 74.168 Additional orders.

In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER OPERATING REQUIREMENTS

§ 74.181 Logs.

(a) The licensee of each experimental television broadcast station shall maintain adequate records of the operation, including:

(1) Hours of operation.

(2) Program transmitted.

(3) Frequency check.

(4) Pertinent remarks concerning transmission.

(5) In case of relay or pickup station, an entry giving points of program origination and receiver location shall be included.

(6) Research and experimentation conducted.

(b) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(c) Station records shall be retained for a period of two years.

[28 F.R. 13706, Dec. 14, 1963, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 74.182 Charges.

No charges, either direct or indirect, shall be made by the licensee of an experimental television broadcast station for the production or transmission of either aural or visual programs transmitted by such station except that this section shall not apply to the transmission of commercial programs by an experimental television relay or pickup broadcast station for retransmission by a television broadcast station.

§ 74.183 Station identification.

Each experimental television broadcast station shall make aural and visual announcements of its call letters and location at the beginning and end of each period of operation, and during operation, at least once every hour.

§ 74.184 Rebroadcasts.

(a) The term "rebroadcast" means reception by radio of the program of a radio station (including a television station), and the simultaneous or subsequent retransmission of such program by a broadcast station.

NOTE 1: As used in this section, the word "program" includes any complete program or part thereof.

NOTE 2: In case a program is transmitted from its point of origin to a broadcast station primarily by telephone facilities in which a section of such transmission is by radio, the broadcasting of this program is not considered a rebroadcast. The broadcasting of a program relayed by a remote pickup broadcast station is not considered a rebroadcast.

(b) No licensee of any experimental television broadcast station shall rebroadcast the program of any radio station without written authority having first been obtained from the Commission upon application. Informal application may be employed.

(c) An application for authority to rebroadcast the program of any radio station shall be accompanied by written consent or certification of consent of the licensee of the station originating the program.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325)

Subpart B—Experimental Facsimile Broadcast Stations

SOURCE: The provisions of this Subpart B appear at 28 F.R. 13708, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 74.201 Facsimile broadcast station.

The term "facsimile broadcast station" means a station licensed to transmit images of still objects for record reception by the general public.

§ 74.202 Frequency assignment.

(a) Frequencies allocated to broadcasting and the various categories of broadcast auxiliary stations, in the Commission's Table of Frequency Allocations (Part 2 of this chapter), may be assigned respectively to experimental facsimile broadcast or experimental facsimile broadcast auxiliary stations.

(b) More than one frequency may be assigned upon a satisfactory showing of the need therefore.

(c) Frequencies best suited to the purpose of the experimentation and on which there appears to be the least likelihood of interference to established stations shall be selected.

(d) In a case of important experimentation which cannot be feasibly conducted on frequencies allocated to broadcasting or the various categories of broadcast auxiliary stations, the Commission may authorize an experimental facsimile broadcast station of any class to operate on other frequencies upon a satisfactory showing of the need therefor and a showing that the proposed operation can be conducted without causing harmful interference to established services: *Provided, however,* That experimental operation which looks toward the development of radio transmitting apparatus or the rendition of any type of regular service using such frequencies will not be authorized prior to a determination by the Commission that the development of such apparatus or the rendition of such service would serve the public interest.

ADMINISTRATIVE PROCEDURE

§ 74.211 Cross reference.

See §§ 74.11 to 74.16.

§ 74.212 Supplementary statement with application for construction permit.

A supplementary statement shall be filed with and made a part of each application for construction permit for any experimental facsimile broadcast station confirming the applicant's understanding:

(a) That all operation upon the frequency requested is for experimental purposes only.

(b) That the frequency requested may not be the best suited to the particular experimental work to be carried on.

(c) That the frequency requested need not be allocated for any service that may be developed as a result of the experimental operation.

(d) That any frequency which may be assigned is subject to change without advance notice or hearing.

(e) That any authorization issued pursuant to the application may be canceled at any time without notice or hearing.

(Sec. 319, 48 Stat. 1089, as amended; 47 U.S.C. 319)

§ 74.213 Supplemental report with renewal application.

A supplemental report shall be filed with and made a part of each application for renewal of license and shall include statements of the following:

(a) Number of hours operated for transmission of facsimile programs.

(b) Comprehensive report of research and experimentation conducted.

(c) Conclusions and program for further developments of the facsimile broadcast service.

(d) All developments and major changes in equipment.

(e) Any other pertinent developments.

(Sec. 308, 48 Stat. 1084, as amended; 47 U.S.C. 308)

LICENSING POLICIES

§ 74.231 Licensing requirements, necessary showing.

(a) An applicant for a construction permit for a new experimental facsimile broadcast station, change in facilities of any existing station, or modification of license is required to make a satisfactory showing of compliance with the general requirements of the Communications Act of 1934, as amended, as well as with regard to the following:

(1) That the applicant has a program of research and experimentation which indicates reasonable promise of substantial contribution to the development of the facsimile broadcast service.

(2) That sufficient facsimile recorders will be distributed to accomplish the experimental program proposed.

(3) That the program of research and experimentation will be conducted by qualified personnel.

(b) A license for an experimental facsimile broadcast station will not authorize exclusive use of any frequency. In case interference would be caused by simultaneous operation of stations licensed experimentally, such licensees shall endeavor to arrange satisfactory time division. If such agreement cannot be reached, the Commission will determine and specify the time division.

§ 74.232 Power limitations.

Experimental facsimile broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 74.233 Emission authorized.

In case emission of a different type than that specified in the license is necessary or desirable in carrying on any phases of experimentation, application setting out fully the needs shall be made by informal application.

§ 74.234 Multiple ownership.

No persons (including all persons under common control) shall control, directly or indirectly, two or more experimental facsimile broadcast stations unless a showing is made that the character of the programs of research requires a licensing of two or more separate stations.

EQUIPMENT

§ 74.251 Equipment changes.

The licensee of an experimental facsimile broadcast station may make any changes in the equipment that are deemed desirable or necessary provided:

(a) That the operating frequency is not permited to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed.

TECHNICAL OPERATION AND OPERATORS

§ 74.261 Frequency tolerance.

The licensee of an experimental facsimile broadcasting station shall maintain the operating frequency of its station within the tolerance specified in the instrument of authorization.

§ 74.262 Frequency monitors and measurements.

The licensee of an experimental facsimile broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

§ 74.263 Time of operation.

(a) A licensee of an experimental facsimile broadcast station is not required to adhere to a regular schedule of operation but shall actively conduct a program of research and experimentation.

(b) The program of research and experimentation as offered by an applicant in compliance with the requirements for obtaining a license for an experimental facsimile broadcast station shall be adhered to in the main, unless the licensee is authorized to do otherwise by the Commission.

(c) The Commission may from time to time require that a station licensed experimentally conduct such experiments as are deemed desirable and reasonable for the development of the service.

§ 74.264 Station inspection.

The licensee of each experimental facsimile broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 74.265 Station and operator licenses; posting of.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however,* If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, a verification card (Form 758–F) is acceptable in lieu of the posting of such license.

§ 74.266 Operator requirements.

One or more radio operators holding radiotelephone first-class or radiotelephone second-class operator licenses shall be on duty at the place where the transmitting apparatus of any experimental facsimile broadcast station is located and in actual charge of its operation. The licensed operator on duty and in charge of a broadcast transmitter may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the broadcast transmitter.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.267 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter set forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

[33 F.R. 19821, Dec. 27, 1968]

§ 74.268 Additional orders.

In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER OPERATING REQUIREMENTS

§ 74.281 Logs.

(a) The licensee of each experimental facsimile broadcast station shall maintain adequate records of the operation, including:

(1) Hours of operation.

(2) Program transmitted.

(3) Frequency check.

(4) Pertinent remarks concerning transmission.

(5) Research and experimentation conducted.

(b) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(c) Station records shall be retained for a period of two years.

[28 F.R. 13708, Dec. 14, 1963, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 74.282 Charges.

(a) A licensee of an experimental facsimile broadcast station shall not make any charge, directly or indirectly, for the transmission of programs.

(b) No licensee of any standard or FM broadcast station shall make any additional charge, directly or indirectly, for the transmission of some phase of its programs by an associated experimental facsimile broadcast station.

§ 74.283 Station identification.

Each experimental facsimile broadcast station shall transmit visual information which will permit it to be identified at the beginning and end of each period of operation, and during operation, at least once every hour.

§ 74.284 Rebroadcasts.

(a) The term "rebroadcast" means reception by radio of the program of a radio station (including a television station), and the simultaneous or subsequent retransmission of such program by a broadcast station.

NOTE 1: As used in this section, the word "program" includes any complete program or part thereof.

NOTE 2: In case a program is transmitted from its point of origin to a broadcast station primarily by telephone facilities in which a section of such transmission is by radio, the broadcasting of this program is not considered a rebroadcast. The broadcasting of a program relayed by a remote pickup broadcast station is not considered a rebroadcast.

(b) No licensee of any experimental facsimile broadcast station shall rebroadcast the program of any radio station without written authority having first been obtained from the Commission upon application. Informal application may be employed.

(c) An application for authority to rebroadcast the program of any radio station shall be accompanied by written consent or certification of consent of the licensee of the station originating the program.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325)

Subpart C—Developmental Broadcast Stations

SOURCE: The provisions of this Subpart C appear at 28 F.R. 13710, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 74.301 Developmental broadcast station.

The term "developmental broadcast station" means a station licensed experimentally to carry on development and research primarily in radiotelephony for the advancement of the broadcast services.

§ 74.302 Frequency assignment.

(a) Frequencies allocated to the various classes of aural broadcasting stations and broadcast auxiliary stations, in the Commission's Table of Frequency Allocations (Part 2 of this chapter), may be assigned to developmental broadcast stations.

(b) More than one frequency may be assigned upon a satisfactory showing of the need therefor.

(c) Frequencies best suited to the purpose of the experimentation and on which there appears to be the least likelihood of interference to established stations shall be selected.

(d) In a case of important experimentation which cannot be feasibly conducted on frequencies allocated to the various classes of aural broadcasting stations and broadcast auxiliary stations, the Commission may authorize a developmental broadcast station to operate on other frequencies upon a satisfactory showing of the need therefor and a showing that the proposed operation can be conducted without causing harmful interference to established services: *Provided, however,* That experimental operation which looks toward the development of radio transmitting apparatus or the rendition of any type of regular service using such frequencies will not be authorized prior to a determination by the Commission that the development of such apparatus or the rendition of such service would serve the public interest.

ADMINISTRATIVE PROCEDURE

§ 74.311 Cross reference.

See §§ 74.11 to 74.16.

§ 74.312 Supplementary statement with application for construction permit.

A supplementary statement shall be filed with and made a part of each application for construction permit for any developmental broadcast station confirming the applicant's understanding:

(a) That all operation upon the frequency requested is for experimental purposes only.

(b) That the frequency requested may not be the best suited to the particular experimental work to be carried on.

(c) That the frequency requested need not be allocated for any service that may be developed as a result of the experimental operation.

(d) That any frequency which may be assigned is subject to change without advance notice or hearing.

(e) That any authorization issued pursuant to the application may be canceled at any time without notice or hearing.

(Sec. 319, 48 Stat. 1089, as amended: 47 U.S.C. 319)

§ 74.313 Supplemental report with renewal application.

A supplemental report shall be filed with and made a part of each application for renewal of license and shall include statements of the following, among others:

(a) The number of hours operated.

(b) Comprehensive report on research and experiments conducted.

(c) Conclusions and program for further development of the broadcast service.

(d) All developments and major changes in equipment.

(e) Any other pertinent developments.

(Sec. 308, 48 Stat. 1084, as amended, 47 U.S.C. 308)

LICENSING POLICIES

§ 74.331 Licensing requirements; necessary showing.

(a) An applicant for a construction permit for a new developmental broadcast station, change of facilities or modification of an existing license is required to make a satisfactory showing of compliance with the general requirements of the Communications Act of 1934, as amended, as well as with regard to the following:

(1) That the applicant has a program of research and experimentation which can best be carried on under the license requested.

(2) That the program of research has reasonable promise of substantial contribution to the development of broadcasting.

(3) That the program of research and experimentation will be conducted by qualified personnel.

(b) A license for a developmental broadcast station will not authorize exclusive use of any frequency. In case interference would be caused by simultaneous operation of stations licensed experimentally, such licensees shall endeavor to arrange satisfactory time division. If such agreement cannot be reached, the Commission will determine and specify the time division.

§ 74.332 Power limitations.

Developmental broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 74.333 Emission authorized.

In case emission of a different type than that specified in the license is necessary or desirable in carrying on any phases of experimentation, application setting out fully the needs shall be made by informal application.

EQUIPMENT

§ 74.351 Equipment changes.

The licensee of a developmental broadcast station may make any changes in the equipment that are deemed desirable or necessary provided:

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed. This limitation shall not apply to developmental broadcast stations licensed to operate in connection with the development and testing of commercial broadcast equipment.

TECHNICAL OPERATION AND OPERATORS

§ 74.361 Frequency tolerance.

The licensee of a developmental broadcasting station shall maintain the operating frequency of its station within the tolerance specified in the instrument of authorization.

§ 74.362 Frequency monitors and measurements.

The licensee of a developmental broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

§ 74.363 Time of operation.

(a) A licensee of a developmental broadcast station is not required to adhere to a regular schedule of operation but shall actively conduct a program of research and experimentation. However, licensees of developmental broadcast stations which are licensed to conduct special intermittent experiments, such as the development and testing of commercial broadcast equipment, are authorized to operate only when there is a need therefor.

(b) The program of research and experimentation as offered by an applicant in compliance with the requirements for obtaining a license for a developmental broadcast station shall be adhered to in the main, unless the licensee is authorized to do otherwise by the Commission.

(c) The Commission may from time to time require that a station licensed experimentally conduct such experiments as are deemed desirable and reasonable for the development of the service.

§ 74.364 Station inspection.

The licensee of each developmental broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 74.365 Station and operator licenses; posting of.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located. However, if the station is licensed for portable-mobile operation, the station license or a photo copy thereof shall be affixed to the equipment or kept in the possession of the operator on duty at the transmitter. If a photo copy is used, the original license shall be available for inspection by an authorized Government representative.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however,* If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, or if the station operated is licensed for portable-mobile operation, a verification card (Form 758-F) is acceptable in lieu of the posting of such license.

NOTE: The term portable-mobile as here used is intended to include any type of portable or mobile operation.

§ 74.366 Operator requirements.

One or more radio operators holding radiotelephone first-class or radiotelephone second-class operator licenses shall be on duty at the place where the transmitting apparatus of any developmental broadcast station is located and in actual charge of its operation. The licensed operator on duty and in charge of a broadcast transmitter may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the broadcast transmitter.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.367 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter set forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

[33 F.R. 19821, Dec. 27, 1968]

§ 74.368 Additional orders.

In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER OPERATING REQUIREMENTS

§ 74.381 Logs.

(a) The licensee of each developmental broadcast station shall maintain adequate records of the operation, including:

(1) Hours of operation.

(2) Program transmitted.

(3) Frequency check.

(4) Pertinent remarks concerning transmission.

(5) In case of relay or remote pickup station, an entry giving points of program origination and receiver location shall be included.

(6) Research and experimentation conducted.

(b) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(c) Station records shall be retained for a period of two years.

[28 F.R. 13710, Dec. 14, 1963, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 74.382 Program service; charges prohibited; announcements.

(a) A licensee of a developmental broadcast station shall broadcast programs only when they are necessary to the experiments being conducted. No regular program service shall be broadcast unless specifically authorized. If the license authorizes the carrying of programs, the developmental broadcast station may transmit the programs of a standard or FM broadcast station or networks provided that during the broadcast a statement is made identifying the station or network originating the program (by giving the call letters of the station or name of the network) and announcing that the program is being broadcast in connection with the experimental operation of a developmental broadcast station.

(b) No licensee of any standard or FM broadcast station shall make any additional charge, directly or indirectly, for the transmission of programs by a developmental broadcast station.

(c) The provisions of paragraphs (a) and (b) of this section shall be applicable to rebroadcasts of the programs of a standard or FM broadcast station or network by a developmental broadcast station.

§ 74.383 Station identification.

Each developmental broadcast station shall announce its call letters at the beginning and end of each period of operation, and during operation, at least once every hour.

§ 74.384 Rebroadcasts.

(a) The term "rebroadcast" means reception by radio of the program of a radio station (including a television station), and the simultaneous or subsequent retransmission of such program by a broadcast station.

NOTE 1: As used in this section, the word "program" includes any complete program or part thereof.

NOTE 2: In case a program is transmitted from its point of origin to a broadcast station primarily by telephone facilities in which a section of such transmission is by radio, the broadcasting of this program is not considered a rebroadcast. The broadcasting of a program relayed by a remote pickup broadcast station is not considered a rebroadcast.

(b) No licensee of any developmental broadcast station shall rebroadcast the program of any radio station without written authority having first been obtained from the Commission upon application. Informal application may be employed.

(c) An application for authority to rebroadcast the program of any radio station shall be accompanied by written consent or certification of consent of the licensee of the station originating the program.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325)

Subpart D—Remote Pickup Broadcast Stations

SOURCE: The provisions of this Subpart D appear at 28 F.R. 13712, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 74.401 Definitions.

Associated broadcasting station. The broadcasting station with which a remote pickup broadcast base or mobile station is licensed as an auxiliary and with which it is principally used.

Attended operation. Operation of a station by a qualified operator on duty at the place where the transmitting apparatus is located with the transmitter in plain view of the operator.

Automatic mobile relay station. A remote pickup broadcast base station actuated by automatic means and used to relay communications between base and mobile stations, between mobile stations, and from mobile stations licensed under the rules of this subpart, to broadcast stations.

Operational communications. Communications related to the technical operation of a broadcasting station and its auxiliaries, other than the transmission of program material and cues and orders directly concerned therewith.

Remote control operation. Operation of a station by a qualified operator at a control position from which the transmitter is not visible but which control position is equipped with suitable control and telemetering circuits so that the essential functions which could be performed at the transmitter can also be performed from the control point.

Remote pickup broadcast base station. A base station licensed for communicating with remote pickup broadcast mobile stations.

Remote pickup broadcast mobile station. A land mobile station licensed for the transmission of program material and related communications from the scene of events, which occur outside a studio, to broadcasting stations and for communicating with other remote pickup broadcast base and mobile stations. (As used in this part, land mobile station includes hand-carried, pack-carried, and other portable transmitters.)

Remote pickup broadcast stations. The term "remote pickup broadcast station" as used in this subpart includes "remote pickup broadcast base station" and "remote pickup broadcast mobile station" as defined in this section.

Studio. Any room or series of rooms equipped for the regular production of broadcast programs of various kinds. A broadcasting booth at a stadium, convention hall, church, or other similar place is not considered to be a studio.

[28 F.R. 13712, Dec. 14, 1963, as amended at 29 F.R. 15522, Nov. 19, 1964]

§ 74.402 Frequency assignment.

(a) The following frequencies are allocated for assignment to remote pickup broadcast base and mobile stations:

(1)

Group A (*kc/s*)
[1] 1606
1622
1646

(2)

Group D (*Mc/s*)	*Group E* (*Mc/s*)	*Group F* (*Mc/s*)	*Group G* (*Mc/s*)	*Group H* (*Mc/s*)
[2] 25.87	[2] 25.91	[2] 25.95	[2] 25.99	[2] 26.03
26.15	26.17	26.19	26.21	26.23
26.25	26.27	26.29	26.31	26.33
26.35	26.37	26.39	26.41	26.43

(3)

Group I (*Mc/s*)	*Group J* (*Mc/s*)
[2] 26.07	[2] 26.09
26.11	26.13
26.45	26.47

(4) *Group K* (*Mc/s*)

[3] 152.87	[3] 153.17	[5] 161.64
[3] 152.93	[3] 153.23	[5] 161.67
[3] 152.99	[3] 153.29	[5] 161.70
[3] 153.05	[3] 153.35	[5] 161.73
[3] 153.11		[5] 161.76

(5)

Group L (*Mc/s*)	*Group M* (*Mc/s*)
[4] 166.25	[4] 170.15

(6) *Group N*

(Mc/s)

450.05	450.55	455.05	455.55
450.15	450.65	455.15	455.65
450.25	450.75	455.25	455.75
450.35	450.85	455.35	455.85
450.45	450.95	455.45	455.95

[1] Subject to the condition that no harmful interference is caused to the reception of standard broadcast stations.

[2] Subject to the condition that no harmful interference is caused to the reception of broadcasting stations.

[3] Subject to the condition that no harmful interference is caused to stations operating in accordance with the Table of Frequency Allocations.

[4] Operation on the frequencies 166.25 Mc/s and 170.15 Mc/s is not authorized (i) within the area bounded on the west by the Mississippi River, on the north by the parallel of latitude 37°30′ N., and on the east and south by that arc of the circle with center at Springfield, Ill., and radius equal to the airline distance between Springfield, Ill., and Montgomery, Alabama, subtended between the foregoing west and north boundaries; (ii) within 150 miles of New York City; and (iii) in Alaska or outside the continental United States; and is subject to the condition that no harmful interference is caused to government radio stations in the band 162–174 Mc/s.

[5] These frequencies may not be used by remote pickup stations in Puerto Rico or the Virgin Islands. In other areas, certain existing stations in the Public Safety and Land Transportation Radio Services have been permitted to continue operation on these frequencies on condition that no harmful interference is caused to remote pickup broadcast stations.

(b) The following frequencies are allocated for assignment to remote pickup base and mobile stations in Puerto Rico and the Virgin Islands only:

(Mc/s)	*(Mc/s)*	*(Mc/s)*
160.89	161.07	161.25
160.95	161.13	161.31
161.01	161.19	161.37

NOTE 1: These frequencies are shared with the Land Transportation Radio Service.

(c) A licensee is not limited with respect to the number of remote pickup broadcast stations which may be licensed for operation in a single area and each such station may be assigned one or more frequencies: *Provided, however,* That such frequency assignments shall be limited to those within a single frequency Group in any subparagraph of paragraph (a) of this section. This limitation does not preclude the assignment of frequencies listed in different subparagraphs to the same licensee. Applicants shall request the assignment of only those frequencies on which operation is contemplated and the transmitter shall be suitably equipped to operate on all assigned frequencies.

(d) Remote pickup broadcast stations will not be granted exclusive frequency assignments, and the same frequency or frequencies may be assigned to other licensees in the same area.

[28 F.R. 13712, Dec. 14, 1963, as amended at 32 F.R. 11992, Aug. 19, 1967]

§ 74.403 Frequency selection to avoid interference.

(a) Where two or more remote pickup broadcast stations are licensed for the same frequency or group of frequencies in the same area and when simultaneous operation is contemplated, the licensees shall endeavor to select frequencies or schedule operation in such manner as to avoid mutual interference. If a mutual agreement to this effect cannot be reached the Commission shall be notified and it will specify the frequency or frequencies on which each station is to be operated.

(b) The following order of priority of transmissions shall be observed on all frequencies except those listed in § 74.402 (a)(3):

(1) The transmission of program material for broadcast.

(2) The transmission of cues and orders immediately necessary thereto.

(3) Operational communications.

(4) Tests or drills to check the performance of stand-by emergency circuits.

NOTE: During an emergency or impending emergency, transmissions directly related to the safety of life and property shall take precedence over all other transmissions.

§ 74.404 Use of FCC Form 425.

(a) Beginning April 1, 1972, applications on FCC Form 425 in lieu of FCC Form 313 shall be submitted by applicants proposing to operate on the frequencies specified in paragraph (c) of this section and who propose to operate such stations in the Chicago, Ill., Regional Area defined in paragraph (d) of this section. Form 425 shall be used to apply for new facilities or to apply for modification, renewal, or assignment of existing authorizations.

(b) Applications on FCC Form 425 shall be submitted to the Commission's office at Washington, D.C. 20554, until

January 1, 1973, at which time they shall be submitted to the Commission's Chicago Regional Office. The address of the Regional Office will be published at a later date.

(c) FCC Form 425 must be used to file for the following frequencies in the Chicago Regional Area:

(1)

Group

D	E	F	G	H
(Mc/s)	*(Mc/s)*	*(Mc/s)*	*(Mc/s)*	*(Mc/s)*
26.15	26.17	26.19	26.21	26.23
26.25	26.27	26.29	26.31	26.33
26.35	26.37	26.39	26.41	26.43

(2)

Group

I	J	K
(Mc/s)	*(Mc/s)*	*(Mc/s)*
26.11	26.13	152.87
26.45	26.47	152.93
		152.99
		153.05
		153.11
		153.17
		153.23
		153.29
		153.35

(d) The Chicago, Ill., Region is defined to consist of the counties listed below:

Illinois

1. Boone.
2. Bureau.
3. Carroll.
4. Champaign.
5. Christian.
6. Clark.
7. Coles.
8. Cook.
9. Cumberland.
10. De Kalb.
11. De Witt.
12. Douglas.
13. Du Page.
14. Edgar.
15. Ford.
16. Fulton.
17. Grundy.
18. Henry.
19. Iroquois.
20. Jo Daviess.
21. Kane.
22. Kankakee.
23. Kendall.
24. Knox.
25. Lake.
26. La Salle.
27. Lee.
28. Livingston.
29. Logan.
30. Macon.
31. Marshall.
32. Mason.
33. McHenry.
34. McLean.
35. Menard.
36. Mercer.
37. Moultrie.
38. Ogle.
39. Peoria.
40. Piatt.
41. Putnam.
42. Rock Island.
43. Sangamon.
44. Shelby.
45. Stark.
46. Stephenson.
47. Tazewell.
48. Vermilion.
49. Warren.
50. Whiteside.
51. Will.
52. Winnebago.
53. Woodford.

Indiana

1. Adams.
2. Allen.
3. Benton.
4. Blackford.

Indiana—Continued

5. Boone.
6. Carroll.
7. Cass.
8. Clay.
9. Clinton.
10. De Kalb.
11. Delaware.
12. Elkhart.
13. Fountain.
14. Fulton.
15. Grant.
16. Hamilton.
17. Hancock.
18. Hendricks.
19. Henry.
20. Howard.
21. Huntington.
22. Jasper.
23. Jay.
24. Kosciusko.
25. Lake.
26. Lagrange.
27. La Porte.
28. Madison.
29. Marion.
30. Marshall.
31. Miami.
32. Montgomery.
33. Morgan.
34. Newton.
35. Noble.
36. Owen.
37. Parke.
38. Porter.
39. Pulaski.
40. Putnam.
41. Randolph.
42. St. Joseph.
43. Starke.
44. Steuben.
45. Tippecanoe.
46. Tipton.
47. Vermilion.
48. Vigo.
49. Wabash.
50. Warren.
51. Wells.
52. White.
53. Whitley.

Iowa

1. Cedar.
2. Clinton.
3. Dubuque.
4. Jackson.
5. Jones.
6. Muscatine.
7. Scott.

Michigan

1. Allegan.
2. Barry.
3. Berrien.
4. Branch.
5. Calhoun.
6. Cass.
7. Clinton.
8. Eaton.
9. Hillsdale.
10. Ingham.
11. Ionia.
12. Jackson.
13. Kalamazoo.
14. Kent.
15. Lake.
16. Mason.
17. Mecosta.
18. Montcalm.
19. Muskegon.
20. Newaygo.
21. Oceana.
22. Ottawa.
23. St. Joseph.
24. Van Buren.

Ohio

1. Defiance.
2. Mercer.
3. Paulding.
4. Van Wert.
5. Williams.

Wisconsin

1. Adams.
2. Brown.
3. Calumet.
4. Columbia.
5. Dane.
6. Dodge.
7. Door.
8. Fond du Lac.
9. Grant.
10. Green.
11. Green Lake.
12. Iowa.
13. Jefferson.
14. Juneau.
15. Kenosha.
16. Kewaunee.
17. Lafayette.
18. Manitowoc.
19. Marquette.
20. Milwaukee.
21. Outagamie.
22. Ozaukee.
23. Racine.
24. Richland.
25. Rock.
26. Sauk.
27. Sheboygan.
28. Walworth.
29. Washington.
30. Waukesha.
31. Waupaca.
32. Waushara.
33. Winnebago.

[36 F.R. 21679, Nov. 12, 1971]

ADMINISTRATIVE PROCEDURE

§ 74.411 Cross reference.

See § 74.11 to 74.16.

LICENSING POLICIES AND GENERAL OPERATING REQUIREMENTS

§ 74.431 Permissible service.

(a) Remote pickup broadcast mobile stations may be used for the transmission of broadcast program material from the scene of events which occur outside a studio and for the transmission of cues and orders and other related communications necessary to the accomplishment of such broadcasts. The program material transmitted over a remote pickup broadcast mobile station shall be intended for simultaneous or delayed broadcast either by its associated broadcasting station or some other broadcasting station or stations. Editing or rearranging such material to suit the needs of the broadcasting station is not precluded. A remote pickup broadcast mobile station may communicate with the broadcasting station with which it is operating, with the base station or stations with which it is associated, and with other remote pickup broadcast mobile stations. Remote pickup broadcast mobile stations may relay the transmissions of an associated base station and other remote pickup broadcast mobile station.

(b) Remote pickup broadcast base stations may be used for the transmission of cues, orders, and instructions to remote pickup broadcast mobile stations for the purpose of dispatching them to the scenes of events to be broadcast, and directing their operation on the scene. Cueing may include the transmission of program material to the remote pickup unit, if necessary. Remote pickup broadcast base stations may also be used to relay transmissions to and from remote pickup broadcast mobile stations. Remote pickup broadcast base stations licensed pursuant to the provisions of § 74.432(d) (2) and (4) may communicate with other remote pickup broadcast base stations.

(c) Remote pickup broadcast base and mobile stations in Alaska, Guam, Hawaii, Puerto Rico, and the Virgin Islands may be used for any purpose related to the operation of the broadcasting station except for transmissions intended for direct reception by the general public.

(d) Remote pickup broadcast base and mobile stations may be used for operational communications on condition that such use does not interfere with the transmission of program material or preparations for the transmission of program material by other remote pickup stations.

(e) In the event of damage or impairment of the regular communication and program circuits of a broadcasting station due to storms, floods, fires, strikes, equipment failures, or other similar causes, remote pickup broadcast base and mobile stations may be used to provide such temporary circuits as may be needed to continue the broadcasting operation, pending the restoration of the regular circuits.

(f) Remote pickup base and mobile stations associated with broadcasting stations participating in the Emergency Broadcast System, or a similar emergency survival communications system, may be used: (1) For the transmission, for broadcasting, of warnings, instructions, and information relating to war, threat of war, a state of public peril or disaster, or other national, state, or local emergency constituting a threat to the safety of life or property; (2) for coordination of effort in connection with such broadcasts; and (3) for periodic tests or drills to ascertain the reliability of the circuit. Drills should not be conducted more than once a week and should be completed as quickly as possible. Individual transmitters may be turned on for alignment, adjustment, and repair whenever necessary. The conduct of a test or drill is subject to the condition that no interference will be caused to remote pickup broadcast base or mobile stations engaged in the transmission of program material, the preparation for such transmission, or other authorized operation.

(g) A remote pickup broadcast mobile station may be operated in conjunction with other broadcasting stations in the area in which it is licensed, at the discretion of the licensee. Remote pickup broadcast mobile stations may be operated in conjunction with broadcasting stations in other areas without prior authority of the Commission, provided that whenever the transmitting equipment will be out of the area in which it is licensed to operate, for more than one day, the Commission in Washington, D.C., the Engineer-in-charge of the radio district in which the remote pickup station is licensed to operate, and the Engineer-in-charge of the radio district in which the operation will occur, are notified in writing in advance of such operation. In cases where the decision to continue operation for more than one day is not made until the operation has begun, the advance notice requirement is waived and the written notice shall be given when such decision is made. The same Commission offices shall be notified when the transmitting equipment has been returned to its licensed area. The licensee of the remote pickup station shall be responsible for the proper use and operation of the equipment regardless of whether it is used with its associated broadcasting station or with other broadcasting stations in the same or in other areas.

(h) The license of a remote pickup broadcast base or mobile station authorizes operation on only one of the assigned frequencies at any one time. A licensee may operate two or more remote pickup broadcast base or mobile stations simultaneously on different frequencies.

(i) Automatic mobile relay stations may be used to relay any authorized transmissions of other remote pickup base and mobile stations except other automatic relay stations operating on any authorized remote pickup frequency. Normally such transmissions will originate from remote pickup broadcast stations operated by the licensee of the automatic relay station. However, transmissions of remote pickup broadcast stations operated by other licensees on a frequency occupied by an automatic mobile relay station may be relayed for monitoring purposes to avoid interference which might be caused by actuating the automatic mobile relay station when the channel on which it operates is occupied. Operation of the automatic mobile relay station for monitoring observations shall be confined to the brief period necessary to determine whether the monitored frequency is in use.

(j) Remote pickup broadcast base and mobile stations operated by one licensee may communicate with remote pickup broadcast base and mobile stations operated by another licensee either directly or via an automatic mobile relay station, for the purpose of scheduling the use of shared remote pickup frequencies, in order to minimize the hazard of mutual interference.

[28 F.R. 13712, Dec. 14, 1963, as amended at 29 F.R. 15522, Nov. 19, 1964]

§ 74.432 Licensing requirements.

(a) A license for a remote pickup broadcast base or mobile station will be issued only to the licensee of a standard, FM, or television broadcasting station. More than one remote pickup broadcast base and mobile station may be authorized to a single licensee. A separate license is required for each transmitter. An application for a new remote pickup broadcast base or mobile station shall specify the frequency or frequencies desired and the transmitter shall be capable of operating on each frequency requested.

(b) The applicant shall specify the broadcasting station with which the remote pickup station is to be used principally and the area of operation shall be considered to be the community which the associated broadcasting station is licensed to serve and the surrounding area considered to be served by the broadcast station. In cases where the applicant is the licensee of more than one class of broadcasting station (standard, FM, or television) in the same area, it may select one for designation as the associated broadcasting station; such designation does not preclude use with other broadcasting stations in the same area at the discretion of the licensee. Remote pickup broadcast mobile stations will not be licensed for operation in more than one area; such operation may be conducted pursuant to the provisions of § 74.431(f).

(c) Portable transmitters designed to be carried to the scene of events to be broadcast, and mobile transmitters, i.e., those permanently installed in mobile vehicles and capable of being operated while in motion as well as during halts at unspecified places, will both be licensed as remote pickup mobile stations. Portable transmitters should normally be stored at the studio or transmitter location of the associated broadcasting station when not in use. Vehicles equipped with mobile transmitters should be stored, when not in use, so as to be available for inspection upon request by any authorized representative of the Commission. In cases where a series of broadcasts are to be made from the same location, portable or mobile transmitters may be left at such locations for the duration of the series of broadcasts, provided that the transmitting apparatus is properly secured so that it may not be operated by unauthorized persons when unattended and it can be made available for inspection upon request by any authorized representatives of the Commission. Prior Commission authority shall be obtained for the installation of any transmitting antenna which will result in any increase in the height of an existing antenna supporting structure or will increase the height of any natural formation or manmade structure by more than 20 feet and will be in existence for more than 2 days.

(d) Transmitters permanently installed at fixed locations will be licensed as remote pickup broadcast base stations. The location of the transmitter will be specified in the station license and it may not be operated at any other location without prior authority of the Commission. Base stations will be licensed only for the following purposes:

(1) To provide communication with remote pickup broadcast mobile stations. Base stations licensed for this purpose will normally be located at the studio or transmitter location of the associated broadcasting station. Any of the frequencies listed in § 74.402 may be requested for this purpose.

(2) To provide one-way or two-way voice communication between the studio and transmitter of a broadcasting station which is the licensee of an aural or television broadcast STL station used for program transmission between the same two points, or to provide such voice communication between the point of origin and the destination of an aural or television broadcast intercity relay system operated by the same licensee. Such operation is limited to the frequencies listed in Groups I and J of § 74.402. Automatic relay stations will not be authorized.

(3) To operate as program circuits between the studio and the transmitter, or to relay programs between broadcasting stations in Alaska, Guam, Hawaii, Puerto Rico, or the Virgin Islands. Except in emergencies, such uses are not permitted within the 48 contiguous United States or the District of Columbia. Any of the frequencies listed in § 74.402 as available in the above places may be requested by applicant.

(4) Base stations may be authorized at suitable locations to provide:

(i) Stand-by program circuits from places where official broadcasts may be made during a war, threat of war, or a state of public peril or disaster or other national, state, or local emergency constituting a threat to the safety of life and property; and

(ii) Circuits to interconnect broadcasting stations participating in the Emergency Broadcast System or a similar emergency survival communications system. An applicant may request the assignment of any of the frequencies listed in § 74.402 for this purpose.

(5) Base stations may be authorized at suitable locations to operate as automatic mobile relay stations. Such operation will be authorized only on frequencies listed in Group N of § 74.402(a). A single licensee may be authorized to operate more than one automatic mobile relay station. However, each licensee will be limited to the use of not more than two frequencies for automatic mobile relay operation in any given area. The priorities of § 74.403(b) apply to the operation of automatic mobile relay stations. Base stations operated as automatic mobile relay stations shall comply with the requirements of § 74.438.

[28 F.R. 13712, Dec. 14, 1963, as amended at 29 F.R. 15522, Nov. 19, 1964]

§ 74.433 Temporary authorizations.

(a) Special temporary authority may be granted for operation, as a remote pickup broadcast station, of equipment already licensed to another class of station or equipment in use by a class of station which under the Communications Act of 1934 does not require a construction permit.

(b) An application for special temporary authority for the operation of a remote pickup broadcast station shall be filed with the Commission at least 10 days previous to the date of operation. Any application received within less than 10 days may be accepted upon due showing of sufficient reasons for the delay in submitting such request. The application shall set forth full particulars of the purpose for which the request is made and shall show the licensee, call letters, and type of equipment of the station proposed to be used and specify the frequency or frequencies, time and date, location, transmitter power, and type emission proposed and the purpose of the operation requested.

(c) An application for special temporary authority to operate another class of station as a remote pickup broadcast station shall specify a frequency or frequencies allocated in § 74.402: *Provided, however*, In case of events of national interest and importance which cannot be transmitted successfully on these frequencies, other frequencies under the jurisdiction of the Commission may be requested if it is shown that the operation thereon will not cause interference to established stations: *And provided further*, That no remote pickup operation will be authorized on frequencies employed in the emergency service or otherwise employed for the safety of life and property.

(d) An application for special temporary authority to operate equipment as a remote pickup broadcast station filed by a person other than the licensee of such equipment shall contain a statement to show that temporary control of the transmissions therefrom has been secured for the duration of the special operation proposed. An application for special temporary authority to operate another class of station as a remote pickup broadcast station filed by a person other than the licensee of a standard or FM broadcast station shall contain a statement to show which broadcast station or stations contemplate broadcast of the program proposed to be transmitted.

NOTE: Informal application may be employed under this section.

§ 74.434 Remote control operation.

Remote-control operation of remote pickup stations will be permitted subject to the following conditions.

(a) A percentage modulation indicator or calibrated program level meter shall be provided at the operating position.

(b) The operator shall have off-and-on control of the power to the last radio stage.

(c) The transmitter shall be so installed and protected that it is not accessible to other than duly authorized persons.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.435 Power limitations.

Remote pickup broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 74.436 Emission authorized.

(a) The license for a remote pickup broadcast station operating on frequencies below 25 Mc/s will normally authorize A3 emission and may in addition authorize A1 and A2 emission where a need therefor is shown. A license for a remote pickup broadcast station operating on frequencies above 25 Mc/s will authorize A3 or F3 emission, depending upon the equipment employed. Stations licensed to employ F3 emission shall limit the frequency swing so that the bandwidth of emission will conform to the requirements of the channel widths authorized as follows:

(1) For stations operating on the frequencies 25.87 to 26.03 Mc/s, 40 kilocycles.

(2) For stations operating on the frequencies 26.07 to 26.47 Mc/s, 20 kilocycles.

(3) For stations operating on the frequencies 152.87 to 153.35, 160.89 to 161.37, 166.25, and 170.15 Mc/s, 60 kilocycles.

(4) For stations operating on the frequencies 450.05 to 450.95 and 455.05 to 455.95 Mc/s, 100 kilocycles.

(5) For stations operating on the frequencies 161.64 to 161.76 Mc/s, 30 kilocycles.

NOTE: The term "frequency swing" means the instantaneous departure of the frequency of the emitted wave from the center frequency resulting from modulation.

(b) Any emissions outside the authorized channel shall be limited to such an extent as not to constitute a source of potential interference to other stations and in no event shall such emissions be in excess of minus 40 decibels as compared to the emissions within the authorized channel.

§ 74.437 Special rules relating to low power broadcast auxiliary stations.

(a) The devices which will be licensed under this section are those which are normally intended to transmit over distances not in excess of a few hundred feet and will fall into two general categories: Cue and control signal transmitters and wireless microphones. Paragraphs (b) to (j) of this section will govern the licensing of such devices.

(b) A license for a low power broadcast auxiliary station will be issued only to the licensee of a standard, FM, or television broadcast station and for use with a specific station or combination of such broadcast stations within the same city. Such stations may be operated at other locations from time to time in accordance with the provisions of paragraph (f) of this section.

(c) The license of a low power broadcast auxiliary station authorizes the transmission of cues and orders to production personnel and participants in broadcast programs and in the preparation therefor, the transmission of program material by means of a wireless microphone worn by a performer or other participant in a program during rehearsal and during the actual broadcast, or the transmission of comments, interviews, and reports from the scene of a remote broadcast. Low power broadcast auxiliary stations operating in the 942–952 Mc/s band may in addition, transmit synchronizing signals and various control signals to portable or hand-carried TV cameras which employ low power radio signals in lieu of cables to deliver picture signals to the control point at the scene of a remote broadcast. All transmissions shall be intended for reception at a receiving point within the same studio, building, stadium, or similar limited indoor or outdoor area or at the location of a nearby remote pickup broadcast mobile station where they will be relayed to a broadcasting station for simultaneous or delayed broadcast.

(d) An application for a new low power broadcast auxiliary station or for a change in an existing authorization shall specify the broadcast station or combination of stations in the same city, as set forth in paragraph (b) of this section, with which it is to be used principally. A single application, filed on FCC Form 313, in duplicate, may be used in applying for authority to construct and operate one or more low power broadcast auxiliary transmitting units provided that such transmitting units are designed for operation in a common frequency band and will be normally operated with the same broadcast station or combination of stations in a single city.

(e) The operation of low power broadcast auxiliary stations will be authorized only in the bands 26.10–26.48 Mc/s, 450–451 Mc/s and 942–952 Mc/s. Transmitting units may be operated on any frequency within the band of frequencies for which the station is licensed: *Provided*, That the emissions are confined to the authorized band. Transmitting units are not required to maintain a constancy of frequency beyond that necessary to insure compliance with the requirements of this paragraph. The emission bandwidth shall not be greater than that necessary for satisfactory transmission.

(f) A low power broadcast auxiliary station may be used in conjunction with broadcast stations of other licensees located in the same area as the broadcast station or stations with which it is licensed without further authority of the Commission, provided that such operation is conducted by the licensee of the low power broadcast auxiliary station. Low power broadcast auxiliary stations may also be operated in conjunction with broadcast stations of its licensee or other licensees in other locations provided that such operation is conducted by the licensee of the low power broadcast auxiliary station and provided further that, if such operation is to be conducted over a consecutive period of more than one day, the Engineer in Charge of the radio district in which the low power broadcast auxiliary station is licensed and the Engineer in Charge of the radio district in which the operation is to be conducted shall be notified in writing at least two days in advance of such operation and of the expected duration of the proposed operation.

(g) The power of the unmodulated carrier at the transmitter output terminals shall not exceed 1 watt. If amplitude modulation is employed, regardless of the characteristics of the modulating signals, the instantaneous peak voltage of the radio frequency carrier shall not exceed a value of twice the unmodulated carrier peak voltage. Licensees may accept the manufacturers power rating. However, it is the licensees responsibility to observe the power limits specified herein. Unusual transmitting antennas or antenna elevations shall not be used to deliberately extend the range of low power broadcast auxiliary stations beyond the limited areas defined in paragraph (c) of this section. All operation of low power broadcast auxiliary stations is subject to the condition that no harmful interference is caused to remote pickup broadcast base and mobile stations, aural broadcast STL and intercity relay stations, international aeronautical fixed stations, or international fixed public stations. Licensees are expected to take reasonable precautions before commencing operation, by monitoring or predetermination of channel occupancy, to insure that harmful interference will not be caused.

(h) A low power broadcast auxiliary transmitting station may be operated only by a person designated by and under the control of the licensee and need not be a licensed operator under Part 13 (Commercial Radio Operators) of the Commission's rules and regulations. Any adjustments or repairs that could affect the proper operation of transmitting units shall be made by or under the immediate supervision of an operator holding a valid first or second class radiotelephone license.

(i) Call signs will not be assigned to low power broadcast auxiliary stations. In lieu thereof, an announcement shall be made at the beginning and end of each period of operation at a single location, over the transmitting unit being operated, identifying the type of transmitting unit, its location, and the call sign of the broadcast station with which it is being used. Transmitting units will normally fall into one of two types: a cueing transmitter or a wireless microphone. A period of operation may consist of a continuous transmission or intermittent transmissions in connection with a single program.

(j) The licensee of each low power broadcast auxiliary station shall maintain adequate records at the main studio or transmitter of the broadcast station with which the auxiliary is principally used, which will accurately show the current location of all transmitting units, the periods of operation at such locations and any other pertinent remarks concerning transmissions. These records shall be retained for a period of 2 years.

[28 F.R. 13712, Dec. 14, 1963, as amended at 33 F.R. 4259, Mar. 7, 1968; 33 F.R. 18033, Dec. 4, 1968; 37 F.R. 19615, Sept. 21, 1972]

EFFECTIVE DATE NOTE: Paragraph (h) of § 73.437 revised at 37 F.R. 19615, Sept. 21, 1972, is effective Oct. 31, 1972. For the convenience of the user, the superseded text is set forth below:

(h) No operator's license is required of the person actually using a low power broadcast auxiliary transmitting unit, provided that an operator holding any commercial radio operator license or permit, except an aircraft radiotelephone operator authorization or a temporary radiotelegraph second-class operator license, is on duty at the place where the transmitting unit is being operated to take immediate steps to correct any condition of improper operation observed. Any adjustments or repairs that could affect the proper operation of transmitting units shall be made by or under the immediate supervision of an operator holding a valid first or second-class radiotelephone license.

§ 74.438 Special requirements for automatic relay stations.

An automatic mobile relay station installation shall include a monitor receiver, a control unit, and one or more relay receivers.

(a) Monitor receiver: A receiver tuned to the frequency assigned to the automatic mobile relay station and connected to the transmitting antenna used by the automatic mobile relay station shall be in operation at the automatic mobile relay station site at all times when the relay transmitter is capable of being turned on automatically. The monitor receiver shall comply with the following requirements:

(1) The receiver shall be equipped with a control circuit which will prevent the relay transmitter from being turned on automatically whenever a signal other than the signal of the relay transmitter is being received.

(2) The sensitivity of the monitor receiver shall be such that a signal of 2 microvolts or more across the antenna input terminals will actuate the "lock-out" control which prevents the transmitter from being turned on automatically.

(3) The "lock-out" control shall be so designed that if the Monitor Receiver is inoperative the relay transmitter cannot be turned on automatically.

(b) Control unit: The control unit may be an integral part of the relay receiver or may be a separate unit into which the output of one or more relay receivers is fed. The control unit shall meet the following requirements:

(1) The control unit shall be so designed that it will turn the relay transmitter on only upon receipt of a predetermined coded signal consisting of at least two tones which may be transmitted either simultaneously or sequentially, or a series of at least three dissimilar pulse combinations transmitted sequentially. In lieu of the coded signal, the control unit may be designed so that the transmitter will remain operative only when receiving a continuous single tone superimposed on the material being relayed.

(2) The control unit shall be capable of turning the transmitter off upon receipt of an appropriate signal. The complexity of the signal used to turn off the relay transmitter is left to the discretion of the licensee.

(3) The control unit shall also be designed so that the absence of a signal from the relay receiver either due to cessation of operation of the station being relayed or failure of the relay receiver or control unit, will automatically place the relay transmitter in an inoperative condition. A suitable time-delay factor may be incorporated to prevent actuation of the automatic cut-off due to momentary failures of the incoming signals.

(c) Relay receiver: One or more receivers tuned to frequencies used by the stations which are to be relayed by the automatic mobile relay station, may be installed at the automatic mobile relay station site. The receivers shall be installed so that they will turn the relay transmitter on and off only through the control unit. The choice of receivers and receiving antennas is left to the discretion of the licensee.

(d) The automatic mobile relay station may accomplish the retransmission of the incoming signals by simple heterodyne frequency conversion or by modulating the transmitter with aural signals obtained by demodulation of the incoming signal. If the relay transmitter is to be modulated with such aural signals the transmitter or the receiver or both shall be equipped with automatic controls which will prevent overmodulation of the relay transmitter.

(e) The transmitting apparatus and control equipment shall be adequately protected against tampering by unauthorized persons.

(f) An application for authority to construct an automatic mobile relay station shall include a satisfactory showing as to the manner of compliance with the requirements of this section.

[29 F.R. 15522, Nov. 19, 1964]

EQUIPMENT

§ 74.451 Equipment changes.

The licensee of a remote pickup broadcast station may make any changes in the equipment that are deemed desirable or necessary provided:

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed.

TECHNICAL OPERATION AND OPERATORS

§ 74.461 Frequency tolerance.

The licensee of a remote pickup broadcast station shall maintain the operating frequency of its station in accordance with the following:

Frequency range	Tolerance (percent)	
	Base station	Mobile station
1,605 to 4,000 kc/s:		
200 watts or less	0.01	0.02
Over 200 watts [1]	.005	.02
4,000 to 30,000 kc/s:		
5 watts or less	.005	.02
Over 5 watts	.005	.005
30 Mc/s to 300 Mc/s:		
5 watts or less	.005	.01
Over 5 watts	.005	.005
300 Mc/s to 500 Mc/s: All powers	.01	.01

[1] The listing of tolerance for power over 200 watts is in accordance with treaty values and shall not be construed as a finding that such power will be authorized.

§ 74.462 Frequency monitors and measurements.

(a) The licensee of a remote pickup broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

(b) Each frequency for which the remote pickup broadcast station is licensed shall be measured at least once during each calendar year.

§ 74.463 Station inspection.

The licensee of each remote pickup broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 74.464 Posting of station licenses.

The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located; *Provided:*

(a) If the transmitter operator is located at a distance from the transmitter pursuant to § 74.434 the station license shall be posted in the above-described manner at the operating position.

(b) If the station is licensed for portable-mobile operation, the station license or a photo copy thereof shall be affixed to the equipment or kept in the possession of the operator on duty at the transmitter. If a photo copy is used the original license shall be available for inspection by an authorized Government representative.

(c) If the station is authorized to operate as an automatic relay station and is operated at an unattended site, the call sign and location of the associated broadcast station together with the legend "Automatic Relay Station" shall be displayed at the relay transmitter site on the transmitter housing or antenna supporting structure so as to be visible to a person standing on the ground at the transmitter site or if installed on the roof of a building, so as to be visible to a person standing on the roof. The display shall be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition by the licensee. The original of the station license and any other instrument of authorization or individual order, shall be kept in the files of the associated broadcast station so as to be available for inspection upon request of any authorized representative of the Commission.

NOTE: The term portable-mobile as here used is intended to include any type of portable or mobile operation.

[28 F.R. 13712, Dec. 14, 1963, as amended at 29 F.R. 15523, Nov. 19, 1964; 37 F.R. 19615, Sept. 21, 1972]

EFFECTIVE DATE NOTE: § 74.464 was amended at 37 F.R. 19615, Sept. 21, 1972, effective Oct. 31, 1972. The heading was revised; the introductory text of (a), (a) (1), (2) and (3) were redesignated as introductory text of section, (a), (b), and (c) respectively; former paragraph (b) was deleted. For the convenience of the user, superseded text is set forth below:

§ 74.464 Station and operator licenses; posting of.

* * * * *

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however,* If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, or if the station operated is licensed for portable-mobile operation, a verification card (Form 758–F) is acceptable in lieu of the posting of such license: *Provided further, however,* That if the operator on duty holds a restricted radiotelephone operator permit of the card form (as distinguished from the diploma form) he shall not post that permit but shall keep it in his personal possession.

§ 74.465 Operator requirements.

(a) A remote pickup broadcast station may be operated only by a person designated by and under control of the licensee and need not be a licensed operator under Part 13 (Commercial Radio Operators) of the Commission's rules and regulations. Any adjustments or repairs shall be made by or under the immediate supervision of an operator holding a first or second license responsible for the maintenance and proper functioning of such remote pickup broadcast station as required by Section 13.61(h) of the Commission's Rules and Regulations.

(b) In cases where a remote pickup broadcast mobile station is taken to the scene of an event to be broadcast and the operator-reporter wishes to leave the location of the transmitter in order to move about freely at the scene with a hand-carried or pack-carried transmitter in order to conduct interviews, obtain a better vantage point to view the scene or otherwise more effectively cover the event, the mobile station may be operated as a temporarily unattended automatic relay station subject to the following conditions:

(1) The input power to the plate of the final radio frequency amplifier of the hand-carried or pack-carried transmitter shall not exceed 1 watt.

(2) The unattended transmitter shall be so equipped that it will be activated by the carrier of the hand-carried or pack-carried transmitter and will transmit only when relaying the transmissions of the hand-carried or pack-carried transmitter or when relaying the transmissions of an associated base station operating on the same frequency as the hand-carried or pack-carried transmitter and directed to the operator-reporter at the scene of the event.

(3) Unless the operator-reporter is equipped to monitor continuously the frequency on which the unattended transmitter operates, while moving about at the scene of the event, he shall observe the frequency before leaving the location of the mobile transmitter to ascertain whether it is in use so as to avoid interference to other users.

(c) Automatic mobile relay stations authorized pursuant to the provisions of § 74.432(d)(5) may be operated unattended.

(d) The operator on duty and in charge of the operation of a remote pickup broadcast station may, at the discretion of the station licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator license held and the rules and regulations governing such other stations. However, such extra duties shall in no way interfere with the duties connected with the operation of the remote pickup station.

(Sec. 318, 48 Stat. 1089, as amended by sec. 1, 74 Stat. 363; 47 U.S.C. 318) [28 F.R. 13712, Dec. 14, 1963, as amended at 29 F.R. 15523, Nov. 19, 1964; 37 F.R. 19615, Sept. 21, 1972]

EFFECTIVE DATE NOTE: The amendment at 37 F.R. 19615, Sept. 21, 1972 is effective Oct. 31, 1972. For the convenience of the user, the superseded text is set forth below:

(a) Except as provided in paragraphs (b) and (c) of this section, an operator holding a valid radiotelephone first-class or second-class operator license or a valid radio-telegraph first-class or second-class operator license or a valid restricted radiotelephone operator permit shall be on duty at the place where the transmitting apparatus is located or at a remote control point established pursuant to the provisions of § 74.434, and in actual charge of the operation at all times when the transmitter is operating.

* * * * *

(e) Further provisions and restrictions concerning the operator's authority are contained in Part 13 of this chapter.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.466 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter set forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

[33 F.R. 19821, Dec. 27, 1968]

§ 74.467 Additional orders.

In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER OPERATING REQUIREMENTS

§ 74.481 Logs.

(a) The licensee of a remote pickup broadcast base or mobile station shall maintain an operating log to show when and for what purpose the station is operated. The following basic data shall be recorded.

(1) The date and time of operation.

(2) The purpose of the operation.

(3) The location of the transmitter, if a mobile or portable station.

(4) The station with which it communicates.

(5) Frequency check, if made.

(6) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(7) Any pertinent remarks concerning the transmissions or equipment

deemed desirable or necessary by the operator.

(b) In cases where a series of intermittent transmissions relating to coverage of a single event are made, an entry showing the time of the beginning of the series and time of the conclusion of the series will suffice. A notation such as "intermittent transmissions in connection with coverage of automobile accident at Main and Fern Streets" will explain the purpose of the operation and location of the transmitter. The station with which it communicates could be the base station (call sign) or the associated broadcast station (call sign). Intermittent but unrelated transmissions shall be logged separately. A single time entry may be made for short transmissions of less than one minute duration. The time of beginning and ending shall be logged for longer transmissions. In all cases, the purpose of the transmission shall be shown and the approximate location of the mobile unit. If the mobile unit is halted, the exact location should be known.

(c) In cases where a base station is used for dispatching mobile units, a running log may be kept at the base station, containing entries for both the base station and one or more mobile units. Each entry should be identified by the call sign of the station making the transmission. The operator in the mobile unit shall keep a record of all transmissions by the mobile unit which are not acknowledged by the base station so that these missed transmissions may be inserted at the appropriate place in the log kept at the base station.

(d) In cases where only mobile units are used, the logs shall be kept by the operator in the mobile unit. A rough log may be kept by the operator in the mobile unit and these notes entered in a permanent log at the end of the tour of duty.

(e) An entry shall be made of any frequency check made pursuant to the requirements of § 74.462.

(f) If the station instrument of authorization requires painting and lighting of the antenna structure, the log entries concerning lighting shall be made daily whether or not the transmitter is used.

(g) Station records shall be kept in such manner as to be available for inspection by a duly authorized representative of the Commission upon request. The records shall be retained for a period of 2 years.

[33 F.R. 16443, Nov. 15, 1968, as amended at 33 F.R. 19821, Dec. 27, 1968; 34 F.R. 396, Jan. 10, 1969]

§ 74.482 Station identification.

(a) Except for stations licensed pursuant to the provisions of § 74.437, each remote pickup broadcast base and mobile station will be assigned an individual call sign. This call sign shall be transmitted over the transmitter to which it is assigned, at the beginning and end of each period of operation. A period of operation may consist of a single continuous transmission or a series of intermittent transmissions related to the broadcast of a single event.

(b) In cases where a period of operation is of more than one hour duration, identification of the remote pickup stations participating in the operation shall be accomplished either by the transmission of the call signs assigned to the individual transmitters or identification of the associated broadcast station.

(c) In cases where an automatic mobile relay station is a part of the circuit, the call sign of the relay transmitter may be transmitted automatically by the relay transmitter or by the remote pickup broadcast base or mobile station that actuates the automatic mobile relay station.

[29 F.R. 15523, Nov. 19, 1964]

Subpart E—Aural Broadcast STL and Intercity Relay Stations

SOURCE: The provisions of this Subpart E appear at 28 F.R. 13716, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 74.501 Classes of stations.

(a) *Aural broadcast STL station.* A fixed station utilizing telephony for the transmission of aural program material between a studio and the transmitter of a broadcasting station other than an international broadcasting station, for simultaneous or delayed broadcast.

(b) *Aural broadcast intercity relay station.* A fixed station utilizing telephony for the transmission of aural program material between broadcasting stations other than international broadcasting stations, for simultaneous or delayed broadcast.

§ 74.502 Frequency assignment.

(a) The frequency band 942–952 Mc/s is divided into nineteen 500 kc/s channels for assignment to aural broadcast STL and intercity relay stations. Each of the following frequencies is the center frequency of a channel:

Mc/s	*Mc/s*	*Mc/s*	*Mc/s*
942.5	945.0	947.5	950.0
943.0	945.5	948.0	950.5
943.5	946.0	948.5	951.0
944.0	946.5	949.0	951.5
944.5	947.0	949.5	

A single broadcast station licensee will normally be limited to the assignment of one 500 kc/s channel between the same point of origin and destination. If the circuit carries only one aural program channel, the center frequency of the channel will be assigned. If a single licensee requires more than one aural program channel between the same point of origin and destination, more than one transmitter may be authorized to operate within a single 500 kc/s channel, employing carrier frequencies above and below the center frequency listed in this paragraph. Where such assignments are made the operating frequencies selected shall be such that the unmodulated carrier frequency plus or minus the sum of M+D does not extend beyond the upper or lower channel edge. M is the maximum modulating frequency and D is the maximum excursion of the carrier from the unmodulated carrier frequency due to modulation. Under these circumstances, the operating frequencies of the unmodulated carriers shall be maintained within .001 percent of the assigned frequencies.

(b) The use of the frequencies listed in paragraph (a) of this section by aural broadcast intercity relay stations is subject to the condition that no harmful interference is caused to other classes of stations operating in accordance with the Table of Frequency Allocations contained in § 2.106 of this chapter.

(c) Any aural broadcast STL or intercity relay station for which there was outstanding a valid construction permit or license on April 16, 1958, specifying operation on any frequency between 890 Mc/s and 942 Mc/s, may continue to be operated on such frequencies for the remainder of the term specified in such authorization and may, upon appropriate application therefor, be granted a renewal of such license, subject to the condition that no harmful interference shall be caused to the radiolocation service operating in the band 890–942 Mc/s and subject to the further condition that the licensee must accept any interference which may be caused by the operation of radiolocation stations in the band 890–942 Mc/s and industrial, scientific, and medical (ISM) equipment in the band 890–940 Mc/s.

§ 74.503 Frequency selection.

(a) Each application for a new station or change in an existing station shall be specific with regard to frequency. In general, the lowest suitable frequency will be assigned which, on an engineering basis, will not cause harmful interference to other stations operating in accordance with existing frequency allocations.

(b) Where it appears that interference may result from the operation of a new station or a change in the facilities of an existing station, the Commission may require a showing that harmful interference will not be caused to existing stations or that if interference will be caused the need for the proposed service outweighs the loss of service due to the interference.

ADMINISTRATIVE PROCEDURE

§ 74.511 Cross reference.

See §§ 74.11 to 74.16.

LICENSING POLICIES AND GENERAL OPERATING REQUIREMENTS

§ 74.531 Permissible service.

(a) An aural broadcast STL station is authorized to transmit aural program material between the studio and transmitter location of a broadcasting station, except an international broadcasting station, for simultaneous or delayed broadcast.

(b) An aural broadcast intercity relay station is authorized to transmit aural program material between broadcasting stations, except international broadcasting stations, for simultaneous or delayed broadcast.

(c) Multiplexing of the STL or intercity relay transmitter may be employed to provide additional communication channels for the transmission of aural program material, operational communications, or material authorized to be transmitted over an FM broadcast station under a valid Subsidiary Communications Authorization (SCA). An aural broadcast STL or intercity relay station may not, however, be operated solely for the transmission of operational or subsidiary communications. Operational communications include cues, orders, and other communications directly related to the operation of the broadcast station as well as special signals used for telemetry or the control of apparatus used in conjunction with the broadcasting operation.

(d) All program material, including subsidiary communications, transmitted over an aural broadcast STL or intercity relay station shall be intended for use by broadcast stations owned or under common control of the licensee or licensees of the STL or intercity relay station. Other broadcast stations may simultaneously utilize such program material with permission of the STL or intercity relay station licensee.

(e) In any case where multiplexing is employed on an aural broadcast STL station for the simultaneous transmission of more than one aural channel, the STL transmitter must be capable of transmitting the multiple channels within the channel on which the STL station is authorized to operate and with adequate technical quality so that each broadcast station utilizing the circuit can meet the technical performance standards stipulated in the rules governing that class of broadcasting station. If multiplex operation is employed during the regular operation of the STL station, the additional circuits shall be in operation at the time that the required periodic performance measurements are made of the overall broadcasting system from the studio microphone input circuit to the broadcast transmitter output circuit.

§ 74.532 Licensing requirements.

(a) An aural broadcast STL or intercity relay station will be licensed only to the licensee or licensees of broadcasting stations other than international broadcasting stations, and for use with broadcast stations owned entirely by or under common control of the licensee or licensees.

(b) More than one aural broadcast STL or intercity relay station may be licensed to a single licensee upon a satisfactory showing that the additional stations are needed to provide different program circuits to more than one broadcast station, to provide program circuits from other studios, or to provide one or more intermediate relay stations over a path which cannot be covered with a single station due to terrain or distance.

(c) If more than one broadcast station or class of broadcast station is proposed to be served by a single STL or intercity relay station, this information shall be clearly set forth in the application for construction permit or license.

(d) Each aural broadcast STL or intercity relay station will be licensed at a specified transmitter location to communicate with a specified receiving location, and the direction of the main radiation lobe of the transmitting antenna will be one of the terms of the license.

§ 74.533 Remote control and unattended operation.

(a) Aural broadcast STL and intercity relay stations may be operated by remote control: *Provided,* That such operation is conducted in accordance with the conditions listed in this section: *And provided further,* That the Commission is notified at least 10 days prior to such operation and that such notification is accompanied by a detailed description of the proposed remote control installation showing the manner of compliance with the following conditions:

(1) The operating position shall be under the control and supervision of the licensee;

(2) A carrier operated device shall be provided at the operating position which shall give a continuous visual indication when the transmitter is radiating; or, in lieu thereof, a device shall be provided which will give a continuous visual indication when any transmitter control circuits have been placed in a condition to produce radiation;

(3) Facilities shall be provided at the operating position which will permit the operator to turn the transmitter carrier on and off at will; and

(4) The transmitter and all of its operating controls shall be so installed and protected that they are not accessible to other than authorized personnel.

(b) In cases where intermediate relay stations are employed in aural broadcast STL or intercity relay systems, such intermediate relay stations may be operated unattended if the following requirements are met:

(1) The transmitter shall be equipped with automatic circuits that will cause it to cease radiating at times when no signal is being received from the station which it is relaying.

(2) The transmitter shall be provided with adequate safeguards to prevent improper operation of the equipment.

(3) The transmitter installation shall be adequately protected against tampering by unauthorized persons.

(4) Whenever an intermediate relay station is in operation, appropriate observations shall be made at the receiving end of the STL or intercity relay circuits at intervals not exceeding 1 hour only by a person designated by and under control of the licensee and need not be a licensed operator under Part 13 (Commercial Radio Operators) of the Commission's rules and regulations.

(5) It shall be the responsibility of the licensee to insure that any repairs or adjustments that may be necessary are made by a person technically qualified to do so.

(c) The Commission may notify the licensee not to commence remote control or unattended operation, or to cancel, suspend, or change the date of the beginning of such operation as and when such action may appear to be in the public interest, convenience, and necessity.

(Sec. 318, 48 Stat. 1089, as amended by sec. 1, 74 Stat. 363; 47 U.S.C. 318) [28 F.R. 13716, Dec. 14, 1963, as amended at 37 F.R. 19615, Sept. 21, 1972]

EFFECTIVE DATE NOTE: The amendment at 37 F.R. 19615, Sept. 21, 1972, is effective Oct. 31, 1972. For the convenience of the user, the superseded text is set forth below:

(a) * * *

(1) The operating position shall be under the control and supervision of the licensee and shall be the place at which a licensed operator meeting the requirements of § 74.565 and responsible for the operation of the transmitter is stationed;

(b) * * *

(4) Whenever an intermediate relay station is in operation, appropriate observations shall be made at the receiving end of the STL or intercity relay circuits at intervals not exceeding one hour by a person holding a valid first or second class radiotelephone operator license, who shall take immediate steps to correct any condition of improper operation that may be observed.

* * * * *

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.534 Power limitations.

Aural broadcast STL and intercity relay stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 74.535 Emission and bandwidth.

(a) Aural broadcast STL and intercity relay stations normally will be authorized to employ frequency modulation only. The maximum frequency excursion of the carrier resulting from modulation shall not exceed 200 kc/s above or below the assigned frequency.

(b) If multiplexing by means of one or more sub-carriers is employed, the maximum sub-carrier frequency used shall be such that 2M+2D does not exceed 500 kc/s, where M is the maximum modulating frequency in cycles per second and 2D equals the total carrier frequency excursion as the result of modulation, expressed in cycles per second.

(c) The channels assigned to aural broadcast STL and intercity relay stations are 500 kc/s in width, the assigned frequency being at the center of the channel. Emissions appearing outside the assigned channel shall be attenuated as follows:

(1) Any emission appearing on a frequency removed from the assigned frequency by between 250 and 500 kc/s shall be attenuated at least 25 decibels below the level of the unmodulated carrier. Compliance with this specification will be deemed to show the occupied bandwidth to be 500 kc/s or less.

(2) Any emission appearing on a frequency removed from the assigned frequency by more than 500 kc/s and up to and including 750 kc/s shall be attenuated at least 35 decibels below the level of the unmodulated carrier.

(3) Any emission appearing on a frequency removed from the assigned frequency by more than 750 kc/s shall be attenuated at least $43+10 \log_{10}$ (power, in watts) decibels below the level of the unmodulated carrier.

§ 74.536 Directional antenna required.

Each aural broadcast STL and intercity relay station is required to employ a directional antenna. Considering one kilowatt of radiated power as a standard for comparative purposes, such antenna shall provide a free space field intensity at one mile of not less than 435 mv/m in the main lobe of radiation toward the receiver and not more than 20 percent of the maximum value in any azimuth 30 degrees or more off the line to the receiver. Where more than one antenna is authorized for use with a single station, the radiation pattern of each shall be in accordance with the foregoing requirement.

EQUIPMENT

§ 74.551 Equipment changes.

(a) Prior Commission approval, upon appropriate application (FCC Form 313) therefor, is required for any of the following changes:

(1) A change in the transmitter as a whole (except replacement with an identical transmitter) or a change in power output.

(2) A change of frequency assignment.

(3) A change in the location of the STL transmitter (except relocation of the equipment within the same building).

(4) Any change in the antenna system which will increase the height of the antenna above the natural formation or man-made structure upon which it is mounted by more than 20 feet or will result in an overall height above ground of more than 170 feet (except where the antenna is mounted below the top of an existing structure which is more than 170 feet high).

(5) Any change in the direction of the main radiation lobe of the transmitting antenna.

(b) Other equipment changes not specifically referred to in this section may be made at the discretion of the licensee, provided that the Engineer-in-charge of the radio district in which the station is located and the Commission in Washington, D.C., are promptly notified in writing upon the completion of such changes, and provided that the changes are set forth in the next application for renewal of license. Where such changes include the installation of multiplex equipment to provide additional aural channels, the purpose for which these added channels will be used shall be stated.

TECHNICAL OPERATION AND OPERATORS

§ 74.561 Frequency tolerance.

The licensee of each aural broadcast STL and intercity relay station shall maintain the operating frequency of the station within plus or minus 0.005 percent of the assigned frequency.

§ 74.562 Frequency monitors and measurements.

The licensee of each aural broadcast STL and intercity relay station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

§ 74.563 Station inspection.

The licensee of each aural broadcast STL and intercity relay station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 74.564 Posting of station licenses.

The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible, in a conspicuous place in the room in which the transmitter is located: *Provided*, That, if the transmitter operator is located at a distance from the transmitter pursuant to § 74.533, the station license shall be posted in the above-described manner at the operating position.

[37 F.R. 19615, Sept. 21, 1972]

EFFECTIVE DATE: § 74.564, as revised at 37 F.R. 19165, Sept. 21, 1972, is effective Oct. 31, 1972. For the convenience of the user, the superseded text appears below:

§ 74.564 Station and operator licenses; posting of.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible, in a conspicuous place in the room in which the transmitter is located: *Provided*, That if the transmitter operator is located at a distance from the transmitter pursuant to § 74.533 the station license shall be posted in the above-described manner at the operating position.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however*, If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, a verification card (Form 758-F) is acceptable in lieu of the posting of such license: *Provided further, however,* That if the operator on duty holds a restricted radiotelephone operator permit of the card form (as distinguished from the diploma form) he shall not post that permit but shall keep it in his personal possession.

§ 74.565 Operator requirements.

An aural broadcast STL and intercity relay may be operated only by a person designated by and under the control of the licensee and need not be a licensed operator under Part 13 (Commercial Radio Operators) of the Commission's rules and regulations. Any adjustments or repairs shall be made by or under the immediate supervision of an operator holding a first or second license responsible for the maintenance and proper functioning of such aural broadcast STL or intercity relay as required by § 13.61(h) of the Commission's rules and regulations of this chapter.

(Sec. 318, 48 Stat. 1089, as amended by sec. 1, 74 Stat. 363; 47 U.S.C. 318) [37 F.R. 19615, Sept. 21, 1972]

EFFECTIVE DATE: § 74.565, as revised at 37 F.R. 19615, Sept. 21, 1972, is effective Oct. 31, 1972. For the convenience of the user, the superseded section appears below:

§ 74.565 Operator requirements.

One or more radio operators holding any class of commercial radio operator license or permit shall be on duty at the place where the transmitting apparatus is located, except as provided in § 4.533, and in actual charge of its operation. Further provisions and restrictions concerning the operator's authority are contained in Part 13 of this chapter. The licensed operator on duty and in charge of a broadcast transmitter may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the broadcast transmitter.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.566 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter set forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

[33 F.R. 19821, Dec. 27, 1968]

§ 74.567 Additional orders.

In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER OPERATING REQUIREMENTS

§ 74.581 Logs.

(a) The licensee of each aural broadcast STL and intercity relay station shall maintain adequate records of the operation, including:

(1) Hours of operation.
(2) Program transmitted.
(3) Frequency check.
(4) Pertinent remarks concerning transmission.

(b) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(c) Station records shall be retained for a period of two years.

[28 F.R. 13716, Dec. 14, 1963, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 74.582 Station identification.

(a) Each aural broadcast STL or intercity relay station shall transmit its call sign at the beginning and end of each period of operation, and during operation, at least once every hour, it shall either transmit its call sign or the call sign of the broadcast station with which it is associated. In cases when an unattended intercity relay system is operated as an "off-the-air" pickup and relay, the transmission of the call sign of the broadcast station which it is relaying will satisfy the hourly identification requirement.

(b) Station identification transmissions during operation need not be made when to make such transmission would interrupt a single consecutive speech, play, religious service, symphony concert, or other such productions. In such cases, the identification transmission shall be made at the first interruption of the entertainment continuity and at the conclusion thereof.

(c) Where more than one aural broadcast STL or intercity relay station is employed in an integrated relay system, the station at the point of origination may originate the transmission of the call signs of all of the stations in the relay system.

(d) Voice transmissions shall normally be employed for station identification. However, other methods of station identification may be permitted or required by the Commission.

Subpart F—Television Auxiliary Broadcast Stations

Source: The provisions of this Subpart F appear at 28 F.R. 13718, Dec. 14, 1963, unless otherwise noted.

Definitions and Allocation of Frequencies

§ 74.601 Classes of television auxiliary broadcast stations.

(a) *Television pickup station.* A land mobile station used for the transmission of television program material and related communications from the scenes of events occurring at points removed from television broadcast station studios to television broadcast stations.

(b) *Television STL station (studio-transmitter link).* A fixed station used for the transmission of television program material and related communications from the studio to the transmitter of a television broadcast station.

(c) *Television intercity relay station.* A fixed station used for intercity transmission of television program material and related communications for use by television broadcast stations.

(d) *Television translator relay station.* A fixed station used for relaying the signals of television broadcast stations to television broadcast translator stations.

Note: Wherever used in this subpart, the term "television broadcast station licensee" includes a television broadcast station permittee.

[28 F.R. 13718, Dec. 14, 1963, as amended at 31 F.R. 15314, Dec. 7, 1966]

§ 74.602 Frequency assignment.

(a) The following frequencies are available for assignment to television pickup, television STL, and television intercity relay stations:

Band A (Mc/s)	Band B (Mc/s)	Band D (Mc/s)	
1990–2008	6875–6900	12700–12725	12975–13000
2008–2025	6900–6925	12725–12750	13000–13025
2025–2042	6925–6950	12750–12775	13025–13050
2042–2059	6950–6975	12775–12800	13050–13075
2059–2076	6975–7000	12800–12825	13075–13100
2076–2093	7000–7025	12825–12850	13100–13125
[1] 2093–2110	7025–7050	12850–12875	13125–13150
2450–2467	7050–7075	12875–12900	13150–13175
2467–2484	7075–7100	12900–12925	13175–13200
2484–2500	7100–7125	12925–12950	13200–13225
----------	----------	12950–12975	13225–13250

[1] The frequencies 2106.4 Mc/s and 2101.8 Mc/s may be assigned to Government earth stations at the locations listed below only, for transmissions in connection with Project Apollo until Dec. 31, 1970.

Goldstone, Calif. (35°23'20" N., 116°50'53" W.)

Guam, Mariana Islands (13°18'34" N., 144°44'10" E.)

Cape Kennedy, Fla. (28°28'54" N., 80°34'35" W.)

Corpus Christi, Tex. (27°39'19" N., 97°22'49" W.)

Kauai, Hawaii (22°07'31" N., 159°40'16" W.)

Full power operation will occur only when spacecraft launched as a part of Project Apollo are in actual flight and at such times TV auxiliary stations operating in the channel 2093–2110 Mc/s must accept any interference that may be caused by such operation. Operation at all other times shall be confined to laboratory testing and subdued radiation spacecraft tests, subject to the condition that no harmful interference is caused to TV auxiliary stations.

Additionally, without a specified termination date, the frequency 2106.4 Mc/s may be assigned at the above named locations for earth-to-space transmissions for tracking, ranging and telecommand purposes in connection with other-than-Apollo space research programs. Such transmissions shall not cause harmful interference to TV auxiliary stations.

Frequencies in the bands 17700–19300 Mc/s, 19400–19700 Mc/s, 27525–31300 Mc/s, and 38600–40000 Mc/s are available for assignment on a case-by-case basis for television pickup, STL and intercity relay purposes. Channel widths and frequency tolerance will be specified in individual authorizations. Frequencies shown above between 2450 and 2500 Mc/s in band A are allocated to accommodate the incidental radiations of industrial, scientific, and medical (ISM) equipment, and stations operating therein must accept any interference that may be caused by the operation of such equipment. Frequencies between 2450 and 2500 Mc/s are also shared with other communication services and exclusive channel assignments will not be made, nor is the channeling shown above necessarily that which will be employed by such other services.

(b) Except as provided in paragraph (a) of this section, each television broadcast station licensee in an area may request the assignment of one channel in Band A or Band B and one channel in Band D on an exclusive basis. In making such exclusive assignments, priority will be based on the filing date of an appropriate application (FCC Form 313) completed in accordance with the instructions thereon. Frequency assignments will normally be made as requested if the requested frequency is not assigned to another licensee on an exclusive basis. However, the Commission reserves the right to assign frequencies other than those requested if, in its opinion, such action is warranted.

(c) Where the relative locations of the studio and transmitter are such as to permit co-channel operation of television STL stations by two or more licensees in the same area, such licensees may, by mutual agreement, request the assignment of a common channel for STL use on an exclusive basis. In the event that such a shared assignment is made, each participating licensee may request the assignment of an individual exclusive channel in Band A, Band B, or Band D in addition to the shared STL channel.

(d) A television broadcast station licensee will normally be limited to the assignment of not more than three channels in Bands A and B combined, only one of which will be assigned on an exclusive basis: *Provided, however*, That additional channels in Bands A and B may be assigned on a non-exclusive basis upon a satisfactory showing that additional channels are necessary and that such additional channels, if assigned, will not be needed to provide an exclusive channel to some other licensee in the same area within the foreseeable future. The number of channels in Band D that may be assigned to a licensee in a single area is not restricted.

(e) Non-exclusive channel assignments are subject to withdrawal without advance notice to provide an exclusive channel assignment to a licensee pursuant to the provisions of paragraph (b) of this section. The Commission reserves the right to select the non-exclusive channel assignment to be withdrawn; however, withdrawals will normally be made in the following order:

(1) The most recent channel assignment to the licensee having the greatest number of assignments in Band A, B, or D. Determination as to whether the withdrawal shall be made in Band A, Band B, or Band D will be based on the design of the equipment proposed to be used by the applicant for whom the exclusive channel is required.

(2) Where two or more licensees are assigned individually an equal number of non-exclusive channels in the same band and a greater number of channels in that band than any one of the other licensees, the assignment of most recent date.

(3) In all other cases the assignment of most recent date of a non-exclusive channel.

(f) Community antenna relay stations may be assigned channels in Band D between 12,700 and 12,950 Mc/s subject to the condition that no harmful interference is caused to television STL and intercity relay stations authorized at the time of such grants. Similarly, new television STL and intercity relay stations shall not cause harmful interference to community antenna relay stations authorized at the time of such grants. The use of channels between 12,700 and 12,950 Mc/s by television pickup stations is subject to the condition that no harmful interference is caused to community antenna relay, television STL and television intercity relay stations.

(g) In the event that a television broadcast station licensee engages a communications common carrier to provide television pickup or television STL service, the frequencies available to that licensee may be assigned to the communications common carrier for the purpose of providing such service to that licensee. For the purpose of applying the provisions with respect to exclusive channel assignments and the withdrawal of channels, channels assigned to communications common carriers to provide television pickup or television STL service to an individual television broadcast station licensee will be considered to be assigned to that television broadcast licensee.

(h) Certain frequencies in Band A (1990–2110 Mc/s) may be used by translator relay stations on a secondary basis, i.e., subject to the condition that no harmful interference is caused to television pickup, television STL, and television intercity relay stations, and that translator relay stations must accept any interference caused by such stations. The upper 6 Mc/s of each of the channels in Band A, except those between 2450 and 2500 Mc/s, is available for use by translator relay stations as follows:

Mc/s

2002–2008
2019–2025
2036–2042
2053–2059
2070–2076
2087–2093
2104–2110

(i) Channel assignments will be made to television pickup, television STL, and television intercity relay stations, without regard to the existence of television translator relay stations.

[28 F.R. 13718, Dec. 14, 1963, as amended at 30 F.R. 1851, Feb. 10, 1965; 30 F.R. 12125, Sept. 23, 1965; 31 F.R. 15314, Dec. 7, 1966; 33 F.R. 3184, Feb. 20, 1968; 35 F.R. 6753, Apr. 29, 1970]

§ 74.603 Sound channels.

(a) The frequencies listed in § 74.602 (a) may be used for the simultaneous transmission of the picture and sound portions of television broadcast programs and for cue and order circuits, either by means of multiplexing or by the use of a separate transmitter within the same channel. When multiplexing of a television STL station is contemplated, consideration should be given to the requirements of § 73.687 of this chapter regarding the overall system performance requirements. Applications for new television pickup, television STL, and television intercity relay stations shall clearly indicate the nature of any multiplexing proposed. Multiplexing equipment may be installed on licensed equipment without further authority of the Commission: *Provided*, That the Commission in Washington, D.C., and the Commission's engineer-in-charge of the radio district in which the station is located shall be promptly notified of the installation of such apparatus: *And provided further*, That the installation of such apparatus on a television STL station shall not result in degradation of the overall system performance of the television broadcast station below that permitted by § 73.687 of this chapter.

(b) The aural portion of television broadcast program material may be transmitted over an aural broadcast STL or intercity relay station licensed under the provisions of Subpart E of this part.

(c) Any television STL station or television intercity relay station used for the transmission of the sound portion only of television program material and for which there was outstanding a valid construction permit or license on April 16, 1958, specifying operation on any frequency between 890 Mc/s and 940 Mc/s may continue to be operated on such frequencies for the remainder of the term specified in such authorization and may, upon appropriate application therefor, be granted a renewal of license subject to the condition that no harmful interference shall be caused to the radiopositioning service operating in the band 890–942 Mc/s and subject to the further condition that the licensee must accept any interference which may be caused by the operation of radiopositioning stations in the band 890–942 Mc/s and industrial, scientific, and medical (ISM) equipment operating in the band 890–940 Mc/s.

(d) Remote pickup broadcast stations may be used in conjunction with television pickup stations for the transmission of the aural portion of television programs or events that occur outside a television studio and for the transmission of cues, orders, and other related communications necessary thereto. The rules governing remote pickup broadcast stations are contained in Subpart D of this part.

§ 74.604 Frequency selection to avoid interference.

(a) Applicants for new television pickup, television STL, and television intercity relay stations shall endeavor to select frequency assignments which will be least likely to result in mutual interference with other licensees in the same area. Consideration should be given to the relative locations of receiving points, normal transmission path, and nature of the contemplated operation.

(b) Because of the more or less continuous nature of the operation of television STL stations, frequency assignments to such stations will normally be designated as the exclusive channel of the licensee pursuant to § 74.602(b).

(c) Where two or more licensees are assigned a common channel for television pickup, television STL, or television intercity relay purposes in the same area and simultaneous operation is contemplated, they shall take such steps as may be necessary to avoid mutual interference. If a mutual agreement to this effect cannot be reached, the Commission shall be notified and it will take such action as may be necessary, including time-sharing arrangements, to assure an equitable distribution of available facilities.

ADMINISTRATIVE PROCEDURE

§ 74.621 Cross reference.

See §§ 74.11 to 74.16.

LICENSING POLICIES AND GENERAL OPERATING REQUIREMENTS

§ 74.631 Permissible service.

(a) The license of a television pickup station authorizes the transmission of program material, orders concerning such program material, and related communications necessary to the accomplishment of such transmissions, from the scenes of events occurring in places other than a television studio, to its associated television broadcast station, to such other stations as are broadcasting the same program material, or to the network or networks with which the television broadcast station is affiliated. Television pickup stations may be operated in conjunction with other television broadcast stations not aforementioned in this paragraph: *Provided,* That the transmissions by the television pickup station are under the control of the licensee of the television pickup station and that such operation shall not exceed a total of 10 days in any 30-day period. Television pickup stations may be used to provide temporary studio-transmitter links or intercity relay circuits consistent with § 74.632 without further authority of the Commission: *Provided, however,* That prior Commission authority shall be obtained if the transmitting antenna to be installed will increase the height of any natural formation or man-made structure by more than 20 feet and will be in existence for a period of more than 2 consecutive days.

NOTE: As used in this subpart, "associated television broadcast station" means a television broadcast station licensed to the licensee of the television auxiliary broadcast station and with which the television auxiliary station is licensed as an auxiliary facility.

(b) A television broadcast STL station is authorized to transmit visual program material between the studio and the transmitter of a television broadcast station for simultaneous or delayed broadcast.

(c) A television intercity relay station is authorized to transmit visual program material between television broadcast stations for simultaneous or delayed broadcast.

(d) The transmitter of an STL or intercity relay station may be multiplexed to provide additional communication channels for the transmission of aural program material and operational communications. Operational communications include voice communications, telemetry signals, alerting signals, fault reporting signals, and control signals all of which must be directly related to the technical operation of the associated broadcast station or the STL or intercity relay system of which the multiplexed transmitter is a part. Aural program material may include the sound accompanying the visual program material transmitted over the STL or intercity relay system or aural program material intended for broadcast by other AM, FM, or TV broadcast stations owned by or under the common control of the licensee of the television STL or intercity relay station. A television broadcast STL or intercity relay station will be authorized only in those cases where the principal use is the transmission of television broadcast program material for use by its associated TV broadcast station. However, STL or intercity relay stations so licensed may be operated at any time for the transmission of aural program material and operational communications whether or not visual program material is being transmitted, provided that such operation does not cause harmful interference to television broadcast pickup, STL, or intercity relay stations transmitting television broadcast program material.

(e) Except as provided in paragraphs (a), (d), and (f) of this section, all program material transmitted over a television pickup, STL, or intercity relay station shall be used by or intended for use by a television broadcast station owned by or under the common control of the licensee of the television pickup, STL, or intercity relay station. Program material transmitted over a television pickup, STL, or intercity relay station and so used by the licensee of such facility may, with the permission of the licensee of the broadcast auxiliary facility, be used by other television broadcast stations and by nonbroadcast closed circuit educational television systems operated by educational institutions.

(f) A television broadcast pickup, STL, or intercity relay station may, at times when it is not transmitting program material to its associated television broadcast station, be used for the transmission of program material to non-broadcast closed circuit educational television systems operated by educational institutions, provided that such use is less than 50 percent of the total use of the broadcast auxiliary facility during any one year of the license period. Use of the broadcast auxiliary facility for this purpose is subject to the condition that no harmful interference is caused to broadcast auxiliary stations operating in accordance with the basic frequency allocation. No charge either direct or indirect shall be made for this use. Licensees shall submit reports with their applications for renewals showing the breakdown of usage in terms of primary and alternate uses, during each year of the license term.

(g) A television translator relay station is authorized only to transmit the signals of a television broadcast station or another translator relay station that have been received directly through space, converted to a channel available under § 74.602(h) and suitably amplified, to television broadcast translator stations for simultaneous retransmission.

[28 F.R. 13718, Dec. 14, 1963, as amended at 29 F.R. 15524, Nov. 19, 1964; 31 F.R. 11721, Sept. 7, 1966; 31 F.R. 15314, Dec. 7, 1966]

§ 74.632 Licensing requirements.

(a) A license for a television pickup, television STL, or television intercity relay station will be issued only to the licensee of a television broadcast station. A separate application is required for each transmitter and the application shall be specific with regard to the frequency requested. Except as provided in § 74.604(b), the first channel assigned in Band A or Band B to a licensee will be considered to be the exclusive assignment provided in § 74.602(b). Exclusive channel assignments in Band D will be designated only upon request. A licensee ment provided in § 74.602(b). Exclusive channel assignment only where there are unassigned channels available. In making such changes, the priority set forth in § 74.602(b) will be observed.

(b) A license for a television intercity relay station may be issued in any case where the circuit will operate between television broadcast stations either by means of "off-the-air" pickup and relay or location of the initial relay station at the studio or transmitter of a television broadcast station.

(c) An application for construction permit for a new television pickup station or for renewal of license of an existing station shall designate the television broadcast station with which it is to be operated and specify the area in which the proposed operation is intended.

(d) In case a licensee has two or more television broadcast stations located in different cities, it shall, in applying for a new television pickup station or for renewal of license of an existing station, designate the television broadcasting station in conjunction with which it is to be operated principally, and it shall not thereafter operate the television pickup station in conjunction with another of its television broadcast stations located in a different city for a total of more than 10 days in any 30-day period.

(e) A license for a television translator relay station will be issued only to the licensee of a television broadcast translator station. The application for construction permit shall designate the television broadcast stations to be relayed and the television broadcast translator station with which it is to be operated.

[28 F.R. 13718, Dec. 14, 1963, as amended at 31 F.R. 15314, Dec. 7, 1966]

§ 74.633 Temporary authorizations.

(a) Special temporary authority may be granted for the operation, as a television auxiliary broadcast station, of equipment licensed to another television broadcast station, or other class of station, or equipment of suitable design not heretofore licensed. Such authority will normally be granted only for special operation of a temporary nature.

(b) A request for special temporary authority for the operation of a television auxiliary broadcast station may be made by informal application, which shall be filed with the Commission at least 10 days prior to the date of the proposed operation: *Provided*, That an application filed within less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An application for special temporary authority shall set forth full particulars of the purpose for which the request is made, and shall show the type of equipment, power output, emission, and frequency or frequencies proposed to be used, as well as the time, date and location of the proposed operation. In the event that the proposed antenna installation will increase the height of any natural formation, or existing man-made structure, by more than 20 feet, a vertical plan sketch showing the height of the structure proposed to be erected, the height above ground of any existing structure, the elevation of the site above mean sea level, and the geographic coordinates of the proposed site, shall be submitted with the application.

(d) A request for special temporary authority shall specify a channel or channels consistent with the provisions of § 74.602: *Provided*, That in the case of events of wide-spread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations: *And provided further*, That in no case will a television auxiliary broadcast operation be authorized on frequencies employed for the safety of life and property.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.634 Remote control operation.

(a) A television auxiliary station may be operated by remote control provided that such operation is conducted in accordance with the conditions listed below, and provided further than the Commission is notified at least 10 days prior to such operation and that such notification is accompanied by a detailed description of the proposed remote control installation showing the manner of compliance with the following conditions:

(1) The operating position shall be under the control and supervision of the licensee and shall be the place at which a licensed operator meeting the requirements of § 74.665 and responsible for the operation of the transmitter is stationed;

(2) A carrier operated device shall be provided at the operating position which shall give a continuous visual indication when the transmitter is radiating; or, in lieu thereof, a device shall be provided which will give a continuous visual indication when any transmitter control circuits have been placed in a condition to produce radiation;

(3) Facilities shall be provided at the operating position which will permit the operator to turn the transmitter carrier on and off at will; and

(4) The transmitter and all of its operating controls shall be so installed and protected that they are not accessible to other than duly authorized personnel.

(b) The Commission may notify the licensee not to commence remote control operation, or to cancel, suspend, or change the date of beginning for such operation as and when such action may appear to be in the public interest, convenience, and necessity.

§ 74.635 Unattended operation.

(a) Television intercity relay stations, television translator relay stations, and television STL stations, where the circuit requires the use of more than one STL transmitter, may be operated unattended: *Provided*, That such operation is conducted in accordance with the conditions listed below: *And provided further*, That the Commission is notified at least 10 days prior to the beginning of such operation and that such notification is accompanied by a detailed description of the proposed installation showing the manner of compliance with the following conditions:

(1) The transmitter is capable of retransmitting by self-actuating means a radio signal received from another radio station or stations;

(2) The transmitter shall be provided with adequate safeguards to prevent improper operation of the equipment;

(3) The transmitter shall be so installed and protected that it is not accessible to other than duly authorized persons;

(4) In the case of television intercity relay stations and television STL stations, appropriate observations shall be made, at intervals not exceeding 1 hour during the period of their operation, at the receiving end of the circuit, by a person holding a valid first- or second-class radiotelephone operator license who shall immediately institute measures sufficient to assure prompt correction of any condition of improper operation that is observed; and

(5) The station licensee shall remain responsible for the proper operation of the station, and all adjustments or tests during or coincident with the installation, servicing, or maintenance of the station which may affect its proper oper-

ation shall be performed by or under the immediate supervision and responsibility of a licensed operator as provided in § 74.665.

(b) The Commission may notify the licensee not to commence unattended operation, or to cancel, suspend, or change the date of the beginning of such operation as and when such action may appear to be in the public interest, convenience, and necessity.

[28 F.R. 13718, Dec. 14, 1963, as amended at 31 F.R. 15314, Dec. 7, 1966]

§ 74.636 Power limitations.

Television auxiliary broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 10 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 74.637 Emission and bandwidth.

(a) Television broadcast auxiliary stations operating on frequencies above 1000 Mc/s may be authorized to employ any type of emission suitable for the transmission of the visual and such accompanying aural signals as may be permitted under the rules of this subpart. Television translator relay stations will be authorized to use only amplitude modulation (A5) for the visual signal and frequency modulation (F3) for the aural signal, obtained by simple heterodyne frequency conversion of the signals of a television broadcast station. The electrical characteristics of the incoming signal shall not be significantly altered except as to frequency and amplitude.

(b) The channels assigned to television broadcast auxiliary stations are designated by upper and lower frequency limits. Emissions outside of these frequency limits shall be attenuated as follows:

(1) Any emission appearing on a frequency above the upper channel limit or below the lower channel limit by between zero and 50 percent of the assigned channel width shall be attenuated at least 25 decibels below the level of the unmodulated carrier. Compliance with this specification will be deemed to show that the occupied bandwidth is no greater than the assigned channel width.

(2) Any emission appearing on a frequency above the upper channel limit or below the lower channel limit by between 50 percent and 150 percent of the assigned channel width shall be attenuated at least 35 decibels below the level of the unmodulated carrier.

(3) Any emission appearing on a frequency above the upper channel limit or below the lower channel limit by more than 150 percent of the assigned channel width shall be attenuated at least $43+10 \log_{10}$ (power, in watts) decibels below the level of the unmodulated carrier.

[28 F.R. 13718, Dec. 14, 1963, as amended at 31 F.R. 15314, Dec. 7, 1966]

EQUIPMENT

§ 74.651 Equipment changes.

(a) Commission authority, upon appropriate formal application (FCC Form 313) therefor, is required for any of the following equipment changes:

(1) A change of the transmitter as a whole (except replacement with an identical transmitter), or a change in the power output.

(2) A change of frequency assignment.

(3) A change in the location of a television STL or television intercity relay station (except relocation of the equipment within the same building) or a change in the area of operation of a television pickup station.

(4) Any change in the antenna system of a television STL or television intercity relay station which will result in a change of more than 20 feet in the height above ground of the antenna and supporting structure, or that will result in a change of the direction of the main radiation lobe.

(b) Other equipment changes not specifically referred to above may be made at the discretion of the licensee provided that the Engineer in Charge of the radio district in which the station is located, and the Commission at its Washington office, are notified in writing upon the completion of such changes, and provided that the changes are appropriately reflected in the next application for renewal of license of the television auxiliary broadcast station filed by the licensee.

(c) Multiplexing equipment may be installed on any licensed television broadcast STL or intercity relay station without further authority of the Commission, provided that the Engineer in Charge of the radio district in which the station is located and the Commission in Washington, D.C., are promptly notified in writing of such addition and the use which will be made of the additional aural circuits, and that the changes are shown in the next application for renewal of license for the station.

TECHNICAL OPERATION AND OPERATORS

§ 74.661 Frequency tolerance.

(a) The licensee of a television auxiliary broadcast station shall maintain the operating frequency of its station so that the normal sideband energy shall fall within the assigned channel. If transmission is by asymmetrical sideband operation, suitable filters or other devices shall be employed to insure a minimum of radiated energy outside the assigned channel.

(b) Television STL stations operating on frequencies shown in § 74.603(b) shall maintain their operating frequency within 0.005 percent of the assigned frequency.

(c) Television translator relay stations shall maintain their operating frequency within 0.002 percent of the assigned frequencies.

[28 F.R. 13718, Dec. 14, 1963, as amended at 31 F.R. 15314, Dec. 7, 1966]

§ 74.662 Frequency monitors and measurements.

The licensee of a television auxiliary broadcast station shall provide means for measuring the operating frequency in order to insure that the emissions are confined to the authorized channel. The date and time of each frequency check, the frequency as measured and a description or identification of the method employed shall be entered in the station log.

§ 74.663 Station inspection.

The licensee of each television auxiliary broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 74.664 Station and operator licenses; posting of.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located: *Provided:*

(1) If the transmitter operator is located at a distance from the transmitter pursuant to § 74.634, the station license shall be posted in the above-described manner at the operating position.

(2) If the station is licensed for mobile operation, the station license or a photo copy thereof shall be affixed to the equipment or kept in the possession of the operators on duty at the transmitter. If a photo copy is used, the original license shall be available for inspection by an authorized government representative.

(3) In cases where the transmitter is operated unattended pursuant to the provisions of § 74.635 the call sign of the unattended station and the name of the licensee, together with the call sign and location of the TV broadcast station(s) with which it operates as an auxiliary, shall be displayed at the transmitter site on the structure supporting the transmitting antenna so as to be visible to a person standing on the ground or other easily accessible point. The display shall be prepared so as to withstand normal weathering over a reasonable period of time and shall be maintained in a legible condition at all times. The station license and other documents referred to in this paragraph, shall be kept in the files of the television broadcast station with which it is licensed as an auxiliary.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however,* That if the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, a duly issued verified statement (Form 759) may be posted at the television auxiliary broadcast station in lieu of such original license: *And provided further,* That if the television auxiliary broadcast station is licensed for mobile operation, a duly issued verification card

(Form 758-F) attesting to the existence of such original license may be carried on the person of the operator in lieu of the posting of such license or verified statement.

NOTE: The term mobile as here used is intended to include any type of mobile operation.

[28 F.R. 13718, Dec. 14, 1963, as amended at 33 F.R. 415, Jan. 11, 1968; 33 FR.. 574, Jan. 17, 1968]

§ 74.665 Operator requirements.

(a) One or more radio operators holding valid radiotelephone first-class or radiotelephone second-class operator licenses shall be on duty at the place where the transmitting apparatus of any television auxiliary broadcast station is located and in actual charge of its operation: *Provided, however*, That if a station is operated by remote control as provided in § 74.634, such operator or operators must be on duty at the control point in lieu of the transmitting location: *And provided further*, That, in case a station is operated unattended as provided in § 74.635 such an operator shall be on duty at the receiving end of the circuit and shall be responsible for the required observations and the proper operation of the station within the terms of its license.

(b) The licensed operator on duty and in charge of a television auxiliary broadcast station may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator license which he holds and the regulations governing such stations; however, such duties shall in nowise interfere with the operation of the television auxiliary broadcast station.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.666 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter set forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

[33 F.R. 19821, Dec. 27, 1968]

§ 74.667 Additional orders.

In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER OPERATING REQUIREMENTS

§ 74.681 Logs.

(a) The licensee of each television auxiliary broadcast station shall maintain adequate records of the operation including:

(1) Hours of operation.

(2) Call letters of broadcast station to which program transmitted.

(3) Frequency check.

(4) Pertinent remarks concerning transmission.

(b) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(c) Station records shall be retained for a period of two years.

[28 F.R. 13718, Dec. 14, 1963, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 74.682 Station identification.

(a) Each television broadcast auxiliary station shall transmit station identification at the beginning and end of each period of operation and at intervals of no more than 1 hour during operation, by one of the following means:

(1) Transmission of its own call sign by visual or aural means or by automatic transmission in international Morse telegraphy.

(2) Visual or aural transmission of the call sign of the TV broadcast station with which it is licensed as an auxiliary.

(3) Visual or aural transmission of the call sign of the TV broadcast station whose signals are being relayed or, where programs are obtained directly from network lines and relayed, the network identification.

(b) Identification transmissions during operation need not be made when to make such transmission would interrupt a single consecutive speech, play, religious service, symphony concert, or any type of production. In such cases, the identification transmission shall be made at the first interruption of the entertainment continuity and at the conclusion thereof.

(c) During occasions when a television pickup station is being used to deliver program material for network distribution it may transmit the network identification in lieu of its own or associated TV station call sign during the actual program pickup. However, if it is providing the network feed through its own associated TV broadcast station it shall perform the station identification required by paragraph (a) of this section at the beginning and end of each period of operation.

(d) A period of operation is defined as a single uninterrupted transmission or a series of intermittent transmissions from a single location or continuous or intermittent transmission from a television pickup station covering a single event from various locations, within a single broadcast day.

(e) Regardless of the method used for station identification it shall be performed in a manner conducive to prompt association of the signal source with the responsible licensee. In exercising the discretion provided by this rule, licensees are expected to act in a responsible manner to assure that result.

(f) Television translator relay stations are exempt from the requirements of this section. However, they shall transmit the call sign of the television broadcast station, the signals of which they are retransmitting.

[31 F.R. 15488, Dec. 8, 1966; 31 F.R. 452, Jan. 17, 1967]

EDITORIAL NOTE: Paragraph (f) added at 31 F.R. 15314, Dec. 7, 1966, and corrected at 31 F.R. 16151, Dec. 16, 1966, was inadvertently omitted from revised § 74.682, and is included here to complete text of the section.

Subpart G—Television Broadcast Translator Stations

SOURCE: The provisions of this Subpart G appear at 28 F.R. 13722, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 74.701 Definitions.

(a) *Television broadcast translator station.* A station in the broadcasting service operated for the purpose of retransmitting the signals of a television broadcast station, another television broadcast translator station, or a television translator relay station, by means of direct frequency conversion and amplification of the incoming signals without significantly altering any characteristic of the incoming signal other than its frequency and amplitude, for the purpose of providing television reception to the general public.

(b) *Primary station.* The television broadcasting station radiating the signals which are retransmitted by a television broadcast translator station.

(c) *VHF translator.* A television broadcast translator station operating on a VHF television broadcast channel.

(d) *UHF translator.* A television broadcast translator station operating on a UHF television broadcast channel.

(e) *UHF translator signal booster.* A station in the broadcasting service operated for the sole purpose of retransmitting the signals of a UHF translator station by amplifying and reradiating such signals which have been received directly through space, without significantly altering any characteristic of the incoming signal other than its amplitude.

[28 F.R. 13722, Dec. 14, 1963, as amended at 31 F.R. 15315, Dec. 7, 1966]

§ 74.702 Frequency assignment.

(a) An applicant for a new television broadcast translator station or for changes in the facilities of an authorized station shall endeavor to select a channel on which its operation is not likely to cause interference to the reception of other stations. The application must be specific with regard to the frequency requested. Only one channel will be assigned to each station.

(b)(1) Any one of the 12 standard VHF channels (2–13 inclusive) may be assigned to a VHF translator on condition that no interference is caused to the direct reception by the public of the signals of any television broadcast station operating on the same or any adjacent channel. Channels 5 and 6 are allocated for nonbroadcast use in Alaska and Hawaii and will not be assigned to a VHF translator in those States.

(2) A VHF translator will also be authorized on any VHF assignment in the television Table of Assignments (§ 73.606(b) of this chapter) provided it has not been assigned to a television broadcast station and provided a transmitter power of 100 watts peak visual power is used in the listed city. Section 73.607(b) of this chapter will not be applicable to such assignments.

(c)(1) Any one of the 15 UHF channels from 55–69, inclusive, may be assigned to a UHF translator of up to and including 100 watts peak visual transmitter output power.

(2) The transmitter site of a UHF translator operating on a channel not listed in the television Table of Assign-

ments (§ 73.606(b) of this chapter) shall not be located:

(i) Within 155 miles of a television broadcast station operating on an assigned channel which is the same as the requested channel;

(ii) Within 55 miles of a television broadcast station operating on an assigned channel which is adjacent to the requested channel;

(iii) Within 20 miles of a television broadcast station operating on an assigned channel which is the second, third, fourth, fifth, or eighth channel above or below the requested channel;

(iv) Within 60 miles of a television broadcast station operating on an assigned channel which is the seventh or 14th channel above or below the requested channel;

(v) Within 75 miles of a television broadcast station operating on an assigned channel which is the 15th channed above or below the requested channel.

(3) The distance specified in this paragraph shall be determined between the proposed site of the translator and the transmitter site of the television broadcast station. Changes in the television Table of Assignments (§ 73.606(b) of this chapter) may be made without regard to existing or proposed television broadcast translator stations and, where such changes result in minimum separations less than those specified above, the licensee of an affected UHF television broadcast translator station shall file an application for a change in channel assignment to comply with the required separations. In the case of changes in the television Table of Assignments affecting VHF channels, existing VHF television broadcast translator stations causing interference to reception of VHF broadcast channels shall eliminate the interference or file an application for a change in channel assignment.

(d) Any one of the UHF channels from 14 through 54 (except channel 37) may also be assigned to a UHF translator station meeting the minimum spacing requirements of paragraph (c), of this section, provided that an adequate showing is made that it is not possible to assign a UHF translator station on a channel from 55 through 69 in the area to be served and meet the requirements of paragraph (c) of this section, and that the highest available channel in the 14–54 range has been selected.

(e) No minimum distance separation between TV translators operating on the same channel is specified. However, assignments which will obviously result in mutual interference between translators will not be made.

(f) Adjacent channel assignments will not be made to television broadcast translator stations intended to serve all or a part of the same area.

(g) A UHF translator will be authorized on any UHF channel which is listed in the television Table of Assignments (§ 73.606(b) of this chapter) and has not been assigned to a television broadcast station: *Provided, however,* That a UHF translator using transmitter power of 1,000 watts may be authorized on a channel which has been assigned to a television broadcast station if the television broadcast station is not in operation. Section 73.607(b) of this chapter will not be applicable to 100-watt translators operating on assigned channels.

(h) In accordance with § 73.603(c) of this chapter, channel 37 will not be assigned to UHF translator stations.

(i) Effective November 15, 1971, no applications for new television translator stations or for changes in channel of existing television translator stations, specifying operation on output channels from 70 through 83, will be accepted for filing. Translator stations operating on those channels and holding valid licenses as of the above date will be afforded protection for the balance of their license terms. License renewals will be granted only on a secondary basis to land mobile radio operations.

(j) Any party who files an application for a 1,000-watt UHF translator to operate on a channel to which a regular television station is assigned but not operating, shall notify the licensee or permittee of the television station, in writing, of the filing of the application and shall certify to the Commission that such notice has been given.

[37 F.R. 19591, Oct. 8, 1971, as amended at 37 F.R. 5945, Mar. 23, 1972]

§ 74.703 Interference.

(a) An application for a new television broadcast translator station or for changes in the facilities of an authorized station will not be granted where it is apparent that inference will be caused. The licensee of a new UHF translator operating on a channel not listed in the television Table of Assignments (§ 73.606 (b) of this chapter) shall protect existing UHF translators from interference resulting from its operation. If interference develops between VHF translators, the problem shall be resolved by mutual agreement among the licensees involved. VHF and UHF translator stations operating on channels not listed in the television table of assignments shall not be entitled to protection from interference by translators operating on channels listed in the television table of assignments, but shall, in all cases, protect translators operating on listed channels from interference.

(b) It shall be the responsibility of the licensee of a VHF translator to correct at its expense any condition of interference to the direct reception of the signals of a television broadcast station operating on the same channel as that used by the VHF translator or on an adjacent channel, which occurs as the result of the operation of the translator. Interference will be considered to occur whenever reception of a regularly used signal is impaired by the signals radiated by the translator, regardless of the quality of such reception or the strength of the signal so used. If the interference cannot be promptly eliminated by the application of suitable techniques, operation of the offending translator shall be suspended and shall not be resumed until the interference has been eliminated. If the complainant refuses to permit the translator licensee to apply remedial techniques which demonstrably will eliminate the interference without impairment of the original reception, the licensee of the translator is absolved of further responsibility.

(c) It shall be the responsibility of the licensee of a television broadcast translator station to correct any condition of interference which results from the radiation of radio frequency energy by its equipment on any frequency outside the assigned channel. Upon notice by the Commission to the station licensee or operator that such interference is being caused, the operation of the television broadcast translator station shall be suspended immediately and shall not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions by the television broadcast translator station: *Provided, however,* That short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

(d) In each instance where suspension of operation is required, the licensee shall submit a full report to the Commission after operation is resumed, containing details of the nature of the interference, the source of the interfering signals, and the remedial steps taken to eliminate the interference.

[28 F.R. 13722, Dec. 14, 1963, as amended at 36 F.R. 19592, Oct. 8, 1971]

ADMINISTRATIVE PROCEDURE

§ 74.711 Cross reference.

See §§ 74.11 to 74.16.

LICENSING POLICIES AND GENERAL OPERATING REQUIREMENTS

§ 74.731 Purpose and permissible service.

(a) Television broadcast translator stations provide a means whereby the signals of television broadcast stations may be retransmitted to areas in which direct reception of such television broadcast stations is unsatisfactory due to distance or intervening terrain barriers.

(b) Except as provided in paragraph (i) of this section, a television broadcast translator station may be used only for the purpose of retransmitting the signals of a television broadcast station, another television broadcast translator station, or a television translator relay station, which have been received directly through space, converted to a different channel by simple heterodyne frequency conversion, and suitably amplified.

(c) The transmissions of each television broadcast translator station shall be intended for direct reception by the general public and any other use shall be incidental thereto. A television broadcast translator station shall not be operated solely for the purpose of relaying signals to one or more fixed receiving points for retransmission, distribution, or further relaying.

(d) The technical characteristics of the retransmitted signals shall not be deliberately altered so as to hinder reception on conventional television broadcast receivers.

(e) A television broadcast translator station shall not deliberately retransmit the signals of any station other than the station it is authorized by license to retransmit. Precautions shall be taken to avoid unintentional retransmission of such other signals.

(f) A locally generated radio frequency signal similar to that of a TV broadcast station and modulated with visual and aural information may be connected to the input terminals of a UHF television broadcast translator for the purpose of transmitting still photographs, slides and recorded voice announcements. The radio frequency signals shall be on the same channel as the normally used off-the-air signal being rebroadcast and the duration of such transmissions shall not exceed 20 seconds at intervals of no less than 1 hour. Connection of the locally generated signals shall be made automatically either by means of a time-switch or upon receipt of a control signal from the TV station being rebroadcast designed to actuate the switching circuit. The switching device shall be so designed that the translator input circuit will be returned to the off-the-air signal within 20 seconds. The apparatus used to generate the local signal which is used to modulate the UHF translator must be capable of producing a visual or aural signal or both which will provide acceptable reception on television receivers designed for the transmission standards employed by TV broadcast stations. Before commencing originations authorized in this paragraph, the licensee of the translator shall furnish to the Commission a complete description of the apparatus proposed to be used for such local originations. The visual and aural material so transmitted shall be limited to seeking or acknowledging financial support deemed necessary to the continued operation of the translator, the sole function of which is the rebroadcast of television signals. Accordingly, such originations are limited to the solicitation of contributions toward defrayal of the costs of installing, operating and maintaining the translator or acknowledgments of financial support for those purposes. Such acknowledgments may include identification of the contributors, the size or nature of the contributions and advertising messages of contributors.

[28 F.R. 13722, Dec. 14, 1963, as amended at 33 F.R. 8676, June 13, 1968]

§ 74.732 Eligibility and licensing requirements.

(a) Subject to the restrictions set forth in paragraph (e) of this section, a license for a television broadcast translator station may be issued to any qualified individual, organized group of individuals, broadcast station licensee, or local civil governmental body, upon an appropriate showing that plans for financing the installation and operation of the station are sufficiently sound to insure prompt construction of the station and dependable service for the duration of the licensed period.

(b) More than one television broadcast translator station may be licensed to the same applicant, whether or not such stations serve substantially the same area, upon an appropriate showing of need for such additional stations. TV translators operated by TV broadcast station licensees are not counted as TV stations for purposes of § 73.636 of this chapter, concerning multiple ownership.

(c) Only one channel will be assigned to each television broadcast translator station. Additional television broadcast translator stations may be authorized to provide additional reception. A separate application is required for each television broadcast translator station and each application shall be complete in all respects.

(d) A VHF translator will not be authorized to serve an area which is receiving satisfactory service from one or more UHF television broadcast stations or UHF translators unless, upon consideration of all applicable public interest factors, it is determined that, exceptionally, such intermixture of VHF and UHF service is justified.

(e) The licensee or permittee of a television broadcasting station, an applicant for a proposed new VHF translator whose application is financially supported by such licensee or permittee, or any person associated with the licensee or permittee, either directly or indirectly, will not be authorized to operate a VHF translator under any of the following circumstances:

(1) Where the proposed translator is intended to provide reception to places which are beyond the Grade B contour of the television broadcast station proposed to be rebroadcast and within the Grade B contour of another television broadcast station assigned to a different principal city: *Provided, however,* That this prohibition will not apply to translators using 100 watts on assignments listed in the television table of assignments (§ 73.606(b) of this chapter).

(2) Where the proposed VHF translator is intended to provide reception to all or a part of any community located within the Grade A contour of any other television broadcast station for which a construction permit or license has been

granted and the programs rebroadcast by the proposed VHF translator will duplicate all or any part of the programs broadcast by such other television broadcast station or stations: *Provided, however*, That this will not preclude the authorization of a VHF translator intended to improve reception of the parent station's signal to any community, any part of the corporate limits of which is within the principal city service contour of such station.

NOTE 1: The contours of a television broadcast station shall be determined in accordance with the procedures set forth in § 73.684 of this chapter.

NOTE 2: Financial support referred to in paragraph (e) of this section includes only support for the preparation, filing and prosecution of applications for new VHF television broadcast translator stations, for the acquisition and installation of transmitting and other apparatus employed by such new VHF translator stations, and for the defrayal of any other costs necessary to placing such new VHF translator stations in operation. Paragraph (e) thus will not bar or limit contributions or support, by any station licensee or permittee or any other person defined in paragraph (e) of this section, for the operation or maintenance of a translator, whether such support is provided in the form of financial contributions or by providing operational or maintenance services.

(f) Any authorization for a VHF translator issued to an applicant described in paragraph (e) of this section will be issued subject to the condition that it may be terminated at any time, upon not less than sixty (60) days notice where the circumstances in the community or area served are so altered as to have prohibited grant of the application had such circumstances existed at the time of its filing.

(g) Paragraphs (e) and (f) of this section will not be applicable to noncommercial educational stations.

(h) The Commission will not act on applications for new television broadcast translator stations or for changes in the facilities of an existing station where such changes will result in an increase in signal range in any horizontal direction until 30 days have elapsed since the date on which "Public Notice" is given by the Commission of acceptance for filing of such application, in order to afford licensees of existing television broadcast stations an opportunity to comment with respect to the effect of the proposed translator on their operations.

(i) VHF translators proposed to be operated with power of 100 watts and UHF translators proposed to be operated with power of 1,000 watts will normally be authorized only to licensees of regular television broadcast stations. Other parties may be authorized to operate such stations upon a satisfactory showing that they have available personnel of sufficient technical knowledge to insure that no interference will occur to other radio services and that satisfactory technical performance will be maintained.

[28 F.R. 13722, Dec. 14, 1963, as amended at 30 F.R. 8847, July 14, 1965; 33 F.R. 8677, June 13, 1968; 36 F.R. 19592, Oct. 8, 1971]

§ 74.733 UHF translator signal boosters.

(a) The licensee of a UHF television broadcast translator station may be authorized to operate one or more signal boosters for the purpose of providing reception to small shadowed areas within the area intended to be served by the translator.

(b) The transmitting apparatus shall consist of a simple linear radio frequency amplifier, with one or more amplifying stages, which is capable of receiving, amplifying, and retransmitting the signals of the parent translator without significantly altering any electrical characteristic of the received signal other than its amplitude. The maximum power input to the plate of the final radio frequency amplifier shall not exceed 5 watts.

(c) The amplifier shall be equipped with suitable circuits which will automatically cause it to cease radiating if no signal is being received from the parent translator station. Care shall be taken in the design of the apparatus to insure that out-of-band radiation is not excessive and that adequate isolation is maintained between the input and output circuits to prevent unstable operation.

(d) The installation of the apparatus and its associated receiving and transmitting antennas shall be in accordance with accepted principles of good engineering practice. Either horizontal, vertical, or circular polarization of the electric field of the radiated signal may be employed. If the isolation between the input and output circuits depends in part upon the polarization or directive properties of the transmitting and receiving antennas, the installation shall be sufficiently rugged to withstand the normal hazards of the environment.

(e) The operation of a UHF translator signal booster is subject to the condition that no harmful interference is caused to the reception of any station, broadcast or non-broadcast, other than the parent translator. The licensee of the UHF translator signal booster is expected to use reasonable diligence to minimize interference to the direct reception of the parent translator station.

(f) UHF translator signal boosters may be operated unattended. Repairs and adjustments shall be made by a qualified person. The required qualifications are set forth in § 74.750 (g) and (h).

(g) An individual call sign will not be assigned to a UHF translator booster station. The retransmission of the call sign of the parent translator will serve as station identification.

(h) Applications for authority to construct and operate a UHF translator signal booster shall be submitted on FCC Form 346A. No construction of facilities or installation of apparatus at the proposed transmitter site shall be made until a construction permit therefor has been issued by the Commission.

(i) The provisions of § 74.765 concerning posting of station license shall apply to a UHF translator signal booster except that the parent UHF translator call sign, followed by the word "Booster", shall be displayed at the signal booster site.

(j) The provisions of §§ 74.767 and 74.781 concerning marking and lighting of antenna structures and station records, respectively, apply to UHF translator signal boosters.

§ 74.734 Unattended operation.

(a) A television broadcast translator station may be operated without a licensed radio operator in attendance if the following requirements are met:

(1) If the transmitter site cannot be reached promptly at all hours and in all seasons, means shall be provided so that the transmitting apparatus can be turned on and off at will from a point which is readily accessible at all hours and in all seasons.

(2) The transmitter shall also be equipped with suitable automatic circuits which will place it in a non-radiating condition in the absence of a signal on the input channel.

(3) The transmitting apparatus and the on-and-off control, if at a location other than the transmitter site, shall be adequately protected against tampering by unauthorized persons.

(4) The Commission shall be supplied with the name, address, and telephone number of a person or persons who may be contacted to secure suspension of operation of the translator within thirty (30) minutes should such action be deemed necessary by the Commission. Such information shall be kept current by the licensee.

(5) In cases where the antenna and supporting structure are considered to be a hazard to air navigation and are required to be painted and lighted under the provisions of Part 17 of this chapter, the licensee shall make suitable arrangements for the daily inspection and logging of the hazard markings required by §§ 17.37 and 17.38 of this chapter.

(b) An application for authority to construct a new television broadcast translator station or to make changes in the facilities of an authorized station, and which proposes unattended operation, shall include an adequate showing as to the manner of compliance with this section.

(c) Unless the applicant specifically requests unattended operation and makes the showing required by paragraph (b) of this section, a person meeting the requirements of § 74.766 shall be on duty at the transmitter site whenever the station is operated.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318) [28 F.R. 13722, Dec. 14, 1963, as amended at 37 F.R. 18540, Sept. 13, 1972; 37 F.R. 19615, Sept. 21, 1972]

Effective Date: The amendment at 37 F.R. 19615, Sept. 21, 1972, is effective Oct. 31, 1972. For the convenience of the user, the superseded text is set forth below:

(c) Unless the applicant specifically requests unattended operation and makes the showing required by paragraph (b) of this section, a licensed radio operator meeting the requirements of § 74.766 shall be on duty at the transmitter site whenever the station is operated.

§ 74.735 Power limitations.

(a) The power output of the final radio frequency amplifier of a VHF translator (except as provided for in paragraph (d) of this section) shall not exceed 1 watt peak visual power if located east of the Mississippi River or 10 watts if located west of the Mississippi River or in Alaska or Hawaii. This power may be fed into a single transmitting antenna or may be divided between two or more transmitting antennas or antenna arrays in any manner found useful or desirable by the licensee. In individual cases, the

Commission may authorize the use of more than one final radiofrequency amplifier at a single VHF translator station, under the following conditions:

(1) Each such amplifier shall be used to serve a different community or area. More than one final radio frequency amplifier will not be authorized to provide service to all or a part of the same community or area.

(2) Each final radiofrequency amplifier shall feed a separate transmitting antenna or antenna array. The transmitting antennas or antenna arrays shall be so designed and installed that the outputs of the separate radiofrequency amplifiers will not combine to reinforce the signals radiated by the separate antennas or otherwise achieve the effect of radiated power in any direction in excess of that which could be obtained with a single antenna of the same design fed by a radiofrequency amplifier with power output no greater than that authorized pursuant to paragraph (a) of this section.

(3) VHF translators employing multiple final radio frequency amplifiers will be licensed as a single station. The separate final radio frequency amplifiers will not be licensed to different licensees.

(b) The transmitter power output of a UHF translator shall be limited to a maximum of 100 watts peak visual power. In no event shall the transmitting apparatus be operated with power output in excess of the manufacturer's rating.

(c) No limit is placed upon the effective radiated power which may be obtained by the use of horizontally or vertically directive transmitting antennas.

(d) VHF translators authorized on channels listed in the television Table of Assignments (§ 73.606(b) of this chapter) will be authorized power output of the final radio frequency amplifier of 100 watts peak visual power only. VHF translators authorized before August 16, 1965, on such allocated channels need not operate with as much as 100 watts peak visual power, but if they operate with less, their operation will be subject to termination upon grant of an application for the channel proposing power of 100 watts.

(e) UHF translators authorized on channels listed in the television Table of Assignments (§ 73.606(b) of this chapter) will be authorized with a peak visual power output of the final radio frequency amplifier of either 100 watts or 1,000 watts only. UHF translators authorized before November 15, 1971, on such channels need not operate with as much as 1,000 watts peak visual power, but if they operate with less, their operation will be subject to termination upon grant of an application for the channel proposing power of 1,000 watts.

[30 F.R. 8847, July 14, 1965, as amended at 33 F.R. 8677, June 13, 1968; 36 F.R. 19592, Oct. 8, 1971]

§ 74.736 Emissions and bandwidth.

(a) The license of a television broadcast translator station authorizes the transmission of the visual signal by amplitude modulation (A5) and the accompanying aural signal by frequency modulation (F3).

(b) Standard width television channels will be assigned and the transmitting apparatus shall be operated so as to limit spurious emissions to the lowest practicable value. Any emissions including intermodulation products and radio frequency harmonics which are not essential for the transmission of the desired picture and sound information shall be considered to be spurious emissions.

(c) Any emissions appearing on frequencies more than 3 megacycles above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

(i) 30 decibels for transmitters rated at no more than 1 watt power output.

(ii) 50 decibels for transmitters rated at more than 1 watt power output.

(iii) 60 decibels for transmitters rated at more than 100 watts power output.

(d) Greater attenuation than that specified in paragraph (c) of this section may be required if interference results from emissions outside the assigned channel.

[28 F.R. 13722, Dec. 14, 1963, as amended at 33 F.R. 8677, June 13, 1968; 36 F.R. 19592, Oct. 8, 1971]

§ 74.737 Antenna location.

(a) An applicant for a new television broadcast translator station or for a change in the facilities of an authorized station shall endeavor to select a site which will provide a line-of-sight transmission path to the entire area intended to be served and at which there is available a suitable signal from the primary station. The transmitting antenna should be placed above growing vegetation and trees lying in the direction of the area intended to be served, to minimize the possibility of signal absorption by foliage.

(b) A site within 5 miles of the area intended to be served is to be preferred if the conditions in paragraph (a) of this section can be met.

(c) Consideration should be given to accessibility of the site at all seasons of the year and to the availability of facilities for the maintenance and operation of the television broadcast translator station.

(d) The transmitting antenna should be located as near as is practical to the transmitter to avoid the use of long transmission lines and the associated power losses.

(e) Consideration should be given to the existence of strong radio frequency fields from other transmitters at the translator site and the possibility that such fields may result in the retransmission of signals originating on frequencies other than that of the primary station.

EQUIPMENT

§ 74.750 Equipment and installation.

(a) After June 10, 1968, applications for new television broadcast translators and for increased transmitter power for previously authorized translators will not be accepted unless the new transmitting apparatus to be employed is type accepted.

(b) Transmitting antennas, antennas used to receive the signals to be rebroadcast, and transmission lines do not have to be type accepted. External preamplifiers may also be used provided that they do not cause improper operation of the translator and compliance with specifications in paragraph (c) of this section does not depend upon the use of such preamplifiers.

(c) The following requirements must be met before translator equipment will be type accepted by the Commission:

(1) The frequency converter and associated amplifiers shall be so designed that the electrical characteristics of a standard television signal introduced into the input terminals will not be significantly altered by passage through the apparatus except as to frequency and amplitude. The overall response of the apparatus within its assigned channel when operating at its rated power output and measured at the output terminals, shall provide a smooth curve, varying within limits separated by no more than 4 decibels: *Provided, however,* That means may be provided to reduce the amplitude of the aural carrier below those limits, if necessary to prevent intermodulation which would mar the quality of the retransmitted picture or result in emissions outside of the assigned channel.

(2) Radio frequency harmonics of the visual and aural carriers, measured at the output terminals of the transmitter, shall be attenuated no less than 60 decibels below the peak visual output power within the assigned channel. All other emissions appearing on frequencies more than 3 megacycles above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

(i) 30 decibels for transmitters rated at no more than 1 watt power output.

(ii) 50 decibels for transmitters rated at more than 1 watt power output.

(iii) 60 decibels for transmitters rated at more than 100 watts power output.

(3) When subjected to variations in ambient temperature between minus 30 degrees and plus 50 degrees Centigrade and variations in power main voltage between 85 percent and 115 percent of rated power supply voltage, the local oscillator frequency stability shall maintain the operating frequency within:

(i) 0.02 percent of its rated frequency for transmitters rated at no more than 100 watts peak visual power.

(ii) 0.002 percent of the rated frequency for transmitters rated at more than 100 watts peak visual power.

(4) The apparatus shall contain automatic circuits which will maintain the peak visual power output constant within 2 decibels when the strength of the input signal is varied over a range of 30 decibels and which will not permit the peak visual power output to exceed the maximum rated power output under any condition. If a manual adjustment is provided to compensate for different average signal intensities, provision shall be made for determining the proper setting for the control, and if improper adjustment of the control could result in improper operation, a label shall be affixed at the adjustment control bearing a suitable warning.

(5) The apparatus shall be equipped with automatic controls which will place it in a non-radiating condition when no signal is being received on the input channel, either due to absence of a transmitted signal or failure of the receiving portion of the translator. The automatic control may include a time delay feature to prevent interruptions in

the translator operation caused by fading or other momentary failures of the incoming signal.

(6) The tube or tubes employed in the final radio frequency amplifier shall be of the appropriate power rating to provide the rated power output of the translator. The normal operating constants for operation at the rated power output shall be specified. The apparatus shall be equipped with suitable meters or meter jacks so that appropriate voltage and current measurements may be made while the apparatus is in operation.

(7) Transmitters of over 100 watts peak visual power shall be equipped with an automatic keying device which will transmit the call sign assigned to the station, in International Morse Code, at least once each 30 minutes during the time the station is in operation. Transmitters of more than one watt but not more than 100 watts peak visual power shall be similarly equipped unless they have in effect a firm arrangement with the television station being rebroadcast for the latter to display their call sign as provided in § 74.783(a)(2). Transmission of the call sign can be accomplished in either of the following ways:

(i) By frequency shift keying; the carrier shift shall not be less than 5 kilocycles or greater than 25 kilocycles;

(ii) By amplitude modulation of the aural FM carrier of at least 30 percent modulation. The audio frequency tone used shall not be within 200 cycles of the 1,000 cycle tone used for Emergency Broadcast System Alerting.[1]

NOTE: Until Dec. 31, 1970, translators may use automatic devices permitted under earlier § 74.750(c)(7), i.e., one interrupting the radiated signals or amplitude modulating the radiated signal with an audiofrequency tone.

(8) Wiring, shielding, and construction shall be in accordance with accepted principles of good engineering practice.

(d) Type acceptance will be granted only upon a satisfactory showing that the apparatus is capable of meeting the requirements of paragraph (c) of this section. The following procedures shall apply:

(1) Any manufacturer of apparatus intended for use at television broadcast translator stations may request type acceptance by following the procedures set forth in Part 2, Subpart F, of this chapter. Equipment found to be acceptable by the Commission will be listed in the "Radio Equipment List, Part A, Television Broadcast Equipment," published by the Commission. These lists are available for inspection at any Field Office of the Commission and at the Washington, D.C., offices of the Commission.

(2) Television broadcast translator apparatus which has been type accepted by the Commission will normally be authorized without additional measurements by the applicant.

(3) [Reserved]

(4) Other rules concerning type acceptance, including information regarding withdrawal of type acceptance, modification of type accepted equipment and limitations on the findings upon which type acceptance is based, are set forth in Part 2, Subpart F, of this chapter.

(e) [Reserved]

(f) The installation of a television broadcast translator station employing type accepted apparatus may be made by a person with sufficient technical knowledge and skill to correctly follow the manufacturer's instructions.

(g) Simple repairs such as the replacement of tubes, fuses, or other plug-in components and the adjustment of non-critical circuits which require no particular technical skill may be made by an unskilled person. Repairs which require the replacement of attached components, adjustment of critical circuits, or technical measurements shall be made only by a person with the knowledge and skill to perform such tasks.

(h) Any tests or adjustments which require the radiation of signals for their completion and which could result in improper operation of the apparatus, shall be made by or under the immediate supervision of a licensed first or second class radiotelephone operator.

(i) The transmitting antenna may be designed to produce either horizontal, vertical, or circular polarization.

[28 F.R. 13722, Dec. 14, 1963, as amended at 33 F.R. 8677, June 13, 1968; 34 F.R. 19765, Dec. 17, 1969; 36 F.R. 19592, Oct. 8, 1971]

§ 74.751 Equipment changes.

(a) No change, either mechanical or electrical, may be made in apparatus which has been type accepted by the

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[1] The National Industry Advisory Committee (NIAC) has under study for the Commission an alerting system using the frequencies 853 and 960 cycles per second. Pending resolution of this study audiofrequency tones for identification purposes within 200 cycles of those frequencies shall not be used.

Commission without prior authority of the Commission. If such prior authority has been given to the manufacturer of type accepted equipment, the manufacturer may issue instructions for such changes citing its authority. In such cases, individual licensees are not required to secure prior Commission approval but shall notify the Commission when such changes are completed.

(b) Formal application (FCC Form 346) is required for any of the following changes:

(1) Replacement of the transmitter as a whole except in those cases where the replacement is an identical transmitter or is a transmitter of identical power rating and is listed in the Commission's "Radio Equipment List, Part A, Equipment Acceptable for Use in Television Broadcast and Television Translator Stations." The Commission's office in Washington, D.C., and the Engineer in Charge of the Radio District in which the translator is located shall be promptly notified of transmitter replacements made without formal authorization pursuant to the exceptions of this paragraph giving the manufacturer and type number of the new transmitter together with a statement certifying that the new installation is operating in accordance with Commission rules and the terms of the license.

(2) A change in the transmitting antenna system, including the direction of radiation, directive antenna pattern, or transmission line.

(3) Any change in the antenna which will increase the overall height above ground by more than 20 feet or will result in an overall height of more than 170 feet above ground.

(4) Any change in the location of the transmitter except a move within the same building or upon the same pole or tower.

(5) Any horizontal change in the location of the transmitting antenna of more than 500 feet.

(6) A change of frequency assignment.

(7) A change of the primary TV station being retransmitted.

(8) A change of authorized operating power.

(c) Other equipment changes not specifically referred to above may be made at the discretion of the licensee, provided that the Engineer in Charge of the radio district in which the television broadcast translator station is located and the Commission's Washington, D.C., office are notified in writing upon completion of such changes, and provided further that the changes are appropriately reflected in the next application for renewal of license of the television broadcast translator station.

[28 F.R. 13722, Dec. 14, 1963, as amended at 31 F.R. 6315, Apr. 26, 1966]

TECHNICAL OPERATION AND OPERATORS

§ 74.761 Frequency tolerance.

The licensee of a television broadcast translator station shall maintain the output frequencies within:

(a) 0.02 percent of the assigned visual carrier frequency and aural carrier center frequency for transmitters rated at not more than 100 watts peak visual power.

(b) 0.002 percent of the assigned visual carrier frequency, and aural carrier center frequency for transmitters rated at more than 100 watts peak visual power.

[36 F.R. 19592, Oct. 8, 1971]

§ 74.762 Frequency monitors and measurements.

(a) The licensee of a television broadcast translator station is not required to provide means for measuring the operating frequencies of the transmitter. However, only equipment having the required stability will be approved for use at a television broadcast translator station.

(b) In the event that a television broadcast translator station is found to be operating beyond the frequency tolerance prescribed in § 74.761, the licensee shall promptly suspend operation of the translator and shall not resume operation until the translator has been restored to its assigned frequencies. Adjustment of the frequency determining circuits of a television broadcast translator station shall be made only by a qualified person in accordance with § 74.750(g).

§ 74.763 Time of operation.

(a) A television broadcast translator station is not required to adhere to any regular schedule of operation. However, the licensee of a television translator station is expected to provide a dependable service to the extent that such is within its control and to avoid unwarranted interruptions to the service provided.

(b) If causes beyond the control of the licensee require that a television broadcast translator station remain inoperative for a period in excess of 10 days, the Engineer in Charge of the radio district in which the station is located shall be notified promptly in writing, describing the cause of failure and the steps taken to place the station in operation again, and shall be notified promptly when the operation is resumed.

(c) Failure of a television broadcast translator station to operate for a period of 30 days or more, except for causes beyond the control of the licensee, shall be deemed evidence of discontinuance of operation and the license of the station will be cancelled.

(d) A television broadcast translator station shall not be permitted to radiate during extended periods when signals of the primary station are not being retransmitted.

§ 74.764 Station inspection.

The licensee of a television broadcast translator station shall make the station and the records required to be kept by the rules in this subpart available for inspection by representatives of the Commission.

§ 74.765 Posting of station license.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the station or the manner of operation shall be kept in the station record file maintained by the licensee so as to be available for inspection upon request to any authorized representative of the Commission.

(b) The call sign of the translator together with the name, address, and telephone number of the licensee or local representative of the licensee if the licensee does not reside in the community served by the translator, shall be displayed at the translator site on the structure supporting the transmitting antenna, so as to be visible to a person standing on the ground at the transmitter site. The display shall be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition by the licensee.

§ 74.766 Operator requirements.

(a) A television broadcast translator station may be operated only by a person designated by and under the control of the licensee and need not be a licensed operator under Part 13 (Commercial Radio Operators) of the Commission's rules and regulations.

(b) A licensed operator employed to operate a TV translator may, at the discretion of the licensee, be employed for other duties or for the operation of another class of station or stations in accordance with the class of license which he holds and the rules and regulations governing such other stations. However, such duties shall in nowise interfere with the operation of the TV translator station.

(Sec. 318, 48 Stat. 1089, as amended by sec. 1, 74 Stat. 363; 47 U.S.C. 318) [28 F.R. 13722, Dec. 14, 1963, as amended at 37 F.R. 19615, Sept. 21, 1972]

EFFECTIVE DATE: The amendment at 37 F.R. 19615, Sept. 21, 1972, is effective Oct. 31, 1972. For the convenience of the user, the superseded text is set forth below:

(a) No licensed radio operator is required for the routine operation of a television broadcast translator station provided that the requirements of § 74.734 are met. Otherwise, an operator holding a valid restricted radiotelephone operator permit or a first or second class radiotelephone operator license shall be on duty at the place where the transmitting apparatus is located at all times when the apparatus is being operated.

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(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.767 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter set forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

[33 F.R. 19821, Dec. 27, 1968]

§ 74.768 Additional orders.

In cases where the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

§ 74.769 Copies of rules.

The licensee of a television broadcast translator station shall have current copies of Part 73, Part 74, and in cases where antenna marking is required, Part 17 of this chapter available for use by the operator in charge, and is expected to be familiar with those rules relating to the operation of a television broadcast translator station. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402, at nominal cost.

OTHER OPERATING REQUIREMENTS

§ 74.781 Station records.

(a) The licensee of a television broadcast translator station shall maintain adequate station records, including the current instrument of authorization, official correspondence with the Commission, maintenance records, contracts, permission for rebroadcasts, and other pertinent documents.

(b) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(c) The station records shall be made available upon request to any authorized representative of the Commission.

(d) Station records shall be retained for a period of two years.

[28 F.R. 13722, Dec. 14, 1963, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 74.783 Station identification.

(a) (1) Each television broadcast translator station of over 100 watts peak visual power shall transmit its call sign in International Morse Code at least once each 30 minutes during the time the station is in operation. The transmission may be accomplished by means of an automatic device as required by § 74.750 (c)(7). Call sign transmissions shall be made at a code speed not in excess of 20 words per minute. At this speed the transmission of each individual call sign will require approximately 4 seconds.

(2) Each television broadcast translator station of 100 watts peak visual power and less (but more than 1 watt), in lieu of transmitting its call letters, may make arrangements with the licensee of the television station whose signals are being rebroadcast to provide for the display of the translator call letters and location each broadcast day twice during each of the periods 7 to 9 a.m. and 3 to 5 p.m. at intervals of not less than 30 minutes during each time period. Television stations which do not begin their broadcast day before 9 a.m. shall make these displays four times a day in the hours closest to these time periods at the specified intervals. This may be accomplished by visual means, with due regard for readability. In addition, arrangements shall be made so that the licensee of the television station will keep on record, and make available to any responsible person the call letters and location of each translator station rebroadcasting its signals, with the name, address and telephone number of the licensee or his service representative to be contacted in cases of malfunction of the translator. It shall be the responsibility of the translator licensee to furnish current information in this respect to the television station licensee. Where a television translator of more than 1 watt but no more than 100 watts peak visual power does not have such arrangements with the station whose signals are being rebroadcast, it shall transmit its own call sign as specified in subparagraph (1) of this paragraph.

(b) The Commission may, in its discretion, specify other methods of identification.

(c) Call signs for television broadcast translator stations will be made up of the initial letter K or W followed by the channel number assigned to the translator and two letters. The use of the initial letter will generally follow the pattern used in the broadcast service, i.e., stations west of the Mississippi River will be assigned an initial letter K and those east of the Mississippi River the letter W. The two letter combinations following the channel number will be assigned in order and requests for the assignment of particular combinations of letters will not be considered. The channel number designator for Channels 2 through 9 will be incorporated in the call sign as a two-digit number, i.e., 02, 03, 04, 05, 06, 07, 08, or 09, to avoid similarities with call signs assigned to Amateur Radio Stations.

[28 F.R. 13722, Dec. 14, 1963, as amended at 34 F.R. 19765, Dec. 17, 1969]

§ 74.784 Rebroadcasts.

(a) The term "rebroadcast" means the reception by radio of the programs or other signals of a radio or television station and the simultaneous or subsequent retransmission of such programs or signals for direct reception by the general public.

(b) The licensee of a television broadcast translator station shall not rebroadcast the programs of any television broadcast station or other television broadcast translator station without obtaining prior consent of the station whose signals or programs are proposed to be retransmitted. The Commission shall be notified of the call letters of each station rebroadcast and the licensee of the television broadcast translator station shall certify that written consent has been received from the licensee of the station whose programs are retransmitted.

(c) A television broadcast translator station is not authorized to rebroadcast the transmissions of any class of station other than a television broadcast station or another television broadcast translator station.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325)

PRE-EXISTING REPEATERS

§ 74.790 [Reserved]

Subpart H—Television Broadcast Booster Stations

SOURCE: The provisions of this Subpart H appear at 28 F.R. 13727, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 74.801 Definitions.

(a) *Television broadcast booster station.* A station in the broadcasting service operated for the sole purpose of retransmitting the signals of a television broadcast station by amplifying and reradiating such signals which have been received directly through space, without significantly altering any characteristic of the incoming signal other than its amplitude.

(b) *Primary station.* The television broadcast station radiating the signals which are retransmitted by a television broadcast booster station.

§ 74.802 Frequency assignment.

A television broadcast booster station will be assigned the channel and carrier frequencies assigned to its primary station.

§ 74.803 Interference to primary station.

(a) An application for a new television broadcast booster station or for a change in the facilities of an existing station shall be accompanied by a detailed showing and discussion of the areas of potential interference. The showing shall include:

(1) A suitable map of the area in which the booster is proposed to be operated showing the location of the booster, the direction from the booster toward the primary station and the distance to the primary station, the radiation pattern of the booster, and the areas in which an unfavorable ratio is likely to exist between the direct signal and the boosted signal. If certain terrain features are expected to confine or otherwise minimize interference, these shall be clearly marked.

(2) A statement as to the approximate number of existing receiving installations which may be adversely affected by the proposed booster operation and the measures which will be employed by the applicant to restore reception, including an estimate of the cost of such restoration and how this cost will be borne.

(b) It shall be the responsibility of the licensee of a television broadcast booster station to correct any condition of interference resulting from the operation of the booster to a receiving installation existing at the time the booster is placed in operation, which causes loss or degradation of on otherwise acceptable service from the primary station if requested to do so by the owner of the affected TV receiver. The licensee of the booster is expected to provide such advice, technical assistance, and materials as may be required to restore the lost service either by rejecting the booster signals to the extent necessary to restore the direct service to its original condition or by utilizing the booster service to replace the lost direct service. Refusal of the complainant to permit the application of remedies which are demonstrably capable of restoring the lost service will relieve the booster licensee of further responsibility for the correction of interference to that complainant.

§ 74.804 Interference to other stations and services.

(a) The licensee of a television broadcast booster station is responsible for the correction of interference to reception of other television broadcast stations or stations in other services, caused by:

(1) Radiation of radio frequency energy outside the channel assigned to the booster.

(2) Radiation of spurious emissions, i.e., emissions not contained in the visual and sound signal received from the primary TV station, within the channel assigned to the booster.

(3) Authorized emissions which produce a field strength at the affected receiver in excess of the theoretical field which would be produced at that same location by the primary TV station if the primary TV station were operating with 5 megawatts effective radiated power from an antenna 2,000 feet above average terrain over a path of normal terrain. The theoretical value of field strength which could be produced by the primary station, under the conditions stipulated, shall be determined by the use of the F(50,50) field strength charts for Channels 14–83, contained in § 73.699 of this chapter.

(b) Upon notification by the Commission that such interference has been reported, operation of the booster shall be suspended and shall not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to any of the above causes: *Provided, however,* That short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures. In each case where suspension of operation is required, the licensee of the TV booster shall, within 10 days after operation is resumed, submit a full report to the Commission of the cause and nature of the interference and the remedial steps taken to eliminate the interference.

(c) An application for a new television broadcast booster station shall contain a suitable map showing the locations of the proposed booster and all other TV boosters and television broadcast stations within 75 miles of the proposed booster site and operating on the same channel as the proposed booster or on any related channel shown in the columns opposite the proposed booster channel in Table IV of § 73.698 of this chapter.

ADMINISTRATIVE PROCEDURE

§ 74.811 Administrative procedure.

See §§ 74.11 to 74.16 inclusive.

LICENSING POLICIES AND GENERAL OPERATING REQUIREMENTS

§ 74.831 Purpose and permissible service.

Television broadcast booster stations provide a means whereby the licensees of television broadcast stations operating in the UHF television broadcast band may provide service to areas of low signal intensity in any region which would be encompassed by the theoretical Grade A contour if the station were assumed to be operating with an effective radiated power of 5,000 kilowatts from an antenna 2,000 feet above average terrain over a transmission path of normal terrain. For the purpose of this section, the distance from a UHF television broadcast station to its theoretical Grade A contour under the above assumptions is 68 miles.

(a) A television broadcast booster station is authorized to retransmit only the signals of its primary station. It shall not retransmit the signals of any other station nor make independent transmissions: *Provided, however,* That locally generated signals may be used to excite the booster apparatus for the purpose of conducting tests and measurements essential to the proper installation and maintenance of the apparatus.

(b) A television broadcast booster station will not be authorized to operate at any location more than 68 miles from its primary station and shall not be operated to produce a field strength greater than 5 millivolts per meter at a height of 30 feet above ground at a distance of more than 68 miles from its primary station.

(c) The transmissions of a television broadcast booster station shall be intended for direct reception by the general public. Such stations may not be used to establish a point-to-point television relay system.

§ 74.832 Eligibility and licensing requirements.

(a) A license for a television broadcast booster station will be issued only to the licensee of a television broadcast station operating in the UHF television broadcast band, and solely for the purpose of retransmitting the signals of such television broadcast station.

(b) An application for a television broadcast booster station shall contain an adequate showing that:

(1) The proposed booster can be installed and operated so as to provide satisfactory reception without causing harmful interference to existing service, by the application of acceptable techniques.

(2) That a signal of sufficient magnitude is available from the primary station at the site of the proposed booster.

(c) No numerical limit is placed upon the number of boosters which may be licensed to a single licensee. A separate application is required for each booster transmitter. Television broadcast booster stations will not be counted as TV stations in applying the multiple ownership provisions of § 73.636 of this chapter.

§ 74.834 Remote control operation.

(a) A television broadcast booster station may be operated by remote control provided that such operation is conducted in accordance with the conditions set forth in subparagraphs (1) through (4) of this paragraph.

(1) The transmitter shall be equipped with automatic devices, which, in the absence of a signal from the primary station, will render the transmitter incapable of emitting radio frequency energy.

(2) The transmitter shall be further equipped with a device, which may be actuated by a coded signal or tone transmitted by the primary station, and which will permit turning the transmitter on and off at will from the primary station. The signal required to be transmitted by the primary station for this purpose shall be of such nature or of duration so short that it will not appreciably degrade normal reception of the primary station.

(3) As a precaution against loss of control due to failure of the control circuit, the circuit shall be designed so as to require reception of a cue signal from the primary station at intervals of one hour or less and failure to receive the cue signal will automatically place the booster transmitter in an inoperative condition.

(4) The transmitter and its associated controls shall be so installed and protected as to be inaccessible to unauthorized persons.

(b) An application for a new television broadcast booster station, or for a change in the facilities of an existing station which proposes remote control operation, shall be accompanied by a satisfactory showing as to the manner of compliance with the above conditions. Unless remote control is specifically authorized pursuant to the above requirements, the booster transmitter shall be under the direct supervision of a qualified operator in accordance with § 74.866.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.835 Power limitations.

(a) A television broadcast booster station will not be authorized to operate with power in excess of that required to provide an adequate signal over the area intended to be served by the booster. Due consideration should be given to the provisions of § 74.804 which requires the licensee of a television broadcast booster station to correct any condition of interference which results from field strengths in excess of those which could be produced by the primary station at the place where interference occurs.

(b) In no event will a television broadcast booster station be authorized to operate with an effective radiated power of more than 5 kilowatts peak visual.

(c) In no event will a television broadcast booster station be authorized to operate at a location, and with an effective radiated power, and antenna height above average terrain, which would produce a predicted field strength of more than 5 millivolts per meter at any location more than 68 miles from the primary station. The predicted field strength of a television broadcast booster station shall be determined in accordance with the procedure set forth in § 74.684 of this chapter. If a directive transmitting antenna is to be used to suppress radiation so as to comply with this requirement, the proposed directive pattern shall be supported with adequate engineering data.

(d) No minimum power is specified for television broadcast booster stations.

§ 74.836 Emissions and bandwidth.

(a) The license of a television broadcast booster station authorizes the transmission of the visual signal by amplitude modulation (A5) and the accompanying aural signal by frequency modulation (F3).

(b) Standard width television channels will be assigned and the emission of a television broadcast booster station shall be confined to the authorized channel in accordance with the Television Technical Standards contained in Part 73, Subpart E, of this chapter, except as provided in paragraph (c) of this section.

(c) Radio frequency harmonics of the visual and aural carriers shall be attenuated no less than 60 decibels for transmitters operating with more than 1 kilowatt power output. For transmitters operating with power output of 1 kilowatt or less, the power in such radio frequency harmonics shall not exceed 1 milliwatt. Other spurious emissions on frequencies more than 3 megacycles outside the assigned channel, including intermodulation products, signals other than those received from the primary station, and radio frequency energy generated within the booster apparatus, shall be attenuated no less than 40 decibels below the peak visual carrier amplitude. Greater attenuation of all spurious emissions may be required if interference is caused to any radio service.

§ 74.837 Antenna location.

(a) The transmitting antenna of a television broadcast booster station shall be located within the Grade A contour of the primary station, as defined in § 74.831.

(b) An applicant for a new television broadcast booster station or for changes in an existing station shall endeavor to select a site which will provide a line-of-sight transmission path to the area intended to be served and at which there is a suitable signal available from the primary station. The transmitting antenna should be placed above growing vegetation lying in the direction of the area intended to be served to minimize the possibility of signal absorption by foliage.

(c) Consideration should be given to accessibility of the site at all seasons of the year and to the availability of facilities for the maintenance and operation of the television broadcast booster station.

(d) Consideration should be given to the existence of strong radio frequency fields from other transmitters at the booster site and possibility that such fields may result in the retransmission of signals originating on frequencies other than that of the primary station.

EQUIPMENT

§ 74.850 Equipment and installation.

(a) An application for a new television broadcast booster station or for changes in the facilities of an existing station shall supply complete technical details of the apparatus to be employed and the overall installation. The functioning of such automatic features or other safeguards as may be incorporated to prevent improper operation shall be fully described. If the apparatus is to be remotely controlled, a detailed description of the control features shall be included.

(b) The overall characteristics of the complete installation shall be essentially linear so as to accomplish retransmission of the incoming signals of the primary station without significantly altering any electrical characteristics other than the overall amplitude. Intermodulation products which may be generated shall be adequately removed from the transmissions of the booster so as not to constitute a source of potential interference. Provision shall be made, in the circuits employed, to prevent the amplifier being driven into a non-linear condition over the full range of signal intensities within which the booster may be called upon to operate, or to cause it to cease radiating should non-linear operation or oscillation of any stage occur.

(c) The isolation between the input and output circuits of the booster, including the receiving and transmitting antenna systems, shall be at least 20 decibels greater than the maximum overall gain of the booster amplifier.

(d) The overall response of the amplifier shall not vary by more than 2 decibels over the entire assigned channel: *Provided, however,* That the amplitude of the aural signal may be decreased by a suitable amount if necessary to minimize intermodulation effects or eliminate interference between the sound and picture signals. The apparatus shall be capable of complying with the requirements of § 74.836(c) with respect to spurious emissions.

(e) In general, the transmitter shall be mounted on racks and panels or in totally enclosed frames protected as required by Article 810 of the National Electrical Code.

(f) The installation of a television broadcast booster station shall be made only by, or under the direct supervision of, a qualified electronics engineer and any repairs or adjustments made during or subsequent to the installation, which could result in improper operation, shall be made by or under the direct supervision of such an engineer or an operator holding a valid first or second class radiotelephone operator license issued by the Commission.

(g) In cases where the electrical characteristics of the transmitting and receiving antennas of a booster station are used to provide the required degree of isolation between the input and output circuits, the installation of such antennas shall be sufficiently rugged and protected as to withstand such hazards as may reasonably be expected to be encountered due to their exposure to the elements and the local environment.

(h) Prior to placing a television broadcast booster station in regular operation, the permittee shall perform sufficient measurements of the completed installation to insure compliance with this section. These measurements together with a detailed description of the methods used in obtaining the measurements shall be submitted with the application for license for the booster station.

(i) Type acceptance of television booster amplifiers may be granted upon request in accordance with the type acceptance procedure set forth in Part 2 of this chapter, provided that measurement data and descriptive information submitted shows that the amplifier is capable of meeting the technical requirements of this subpart. The following measurement data must be supplied:

(1) Radio frequency power output (visual peak power).

(2) Over-all gain of the amplifier vs. frequency throughout the entire channel in which it is designed to operate.

(3) Spurious emissions appearing on frequencies outside the channel in which it is designed to operate, including radio frequency harmonics up to 2,000 megacycles.

§ 74.851 Equipment changes.

(a) Formal application (FCC Form 343) is required for any of the following changes:

(1) Replacement of the transmitter as a whole, except replacement with an identical transmitter, or any modification which could result in a change in the electrical characteristics or overall performance of the booster installation.

(2) A change in the transmitting antenna system, including the direction of radiation, directive pattern, or transmission line.

(3) An increase in the authorized overall height of the antenna above ground of more than 20 feet or which will result in an overall height above ground of more than 170 feet.

(4) A change in the control system.

(5) Any change in the location of the transmitter except a move within the same building or upon the same tower or pole, and any horizontal change in the antenna location of the transmitting antenna in excess of 500 feet.

(6) A change of frequency assignment.

(7) A change of authorized operating power.

(b) Other equipment changes not specifically referred to above may be made at the discretion of the licensee, provided that the Engineer in Charge of the radio district in which the television broadcast booster station is located and the Commission's Washington, D.C., office are notified in writing upon completion of such changes, and provided, further, that the changes are appropriately reflected in the next application for renewal of license of the television broadcast booster station.

TECHNICAL OPERATION AND OPERATORS

§ 74.861 Frequency tolerance.

The visual carrier frequency and the aural center frequency of the television signals transmitted by a television broadcast booster station shall be identical with those of the primary station.

§ 74.862 Frequency monitors and measurements.

The licensee of a television broadcast booster is not required to provide means for measuring the operating frequencies of the booster transmitter.

§ 74.863 Time of operation.

(a) A television broadcast booster station is not required to adhere to any regular schedule of operation. However, the licensee of a television booster station is expected to provide a dependable service to the extent that such is within its control and to avoid unwarranted interruptions to the service provided.

(b) If causes beyond the control of the licensee require that a television broadcast booster station remain inoperative for a period in excess of 10 days, the Engineer in Charge of the radio district in which the station is located shall be notified promptly in writing, describing the cause of failure and the steps taken to place the station in operation again, and shall be notified promptly when the operation is resumed.

(c) Failure of a television broadcast booster station to operate for a period of 30 days or more, except for causes beyond the control of the licensee, shall be deemed evidence of discontinuance of operation and the license of the station will be automatically forfeited.

(d) A television broadcast booster station shall not be operated during periods when the primary station is not operating.

§ 74.864 Station inspection.

The licensee of a television broadcast booster station shall make the station and the records required to be kept available for inspection upon request by representatives of the Commission.

§ 74.865 Posting of station and operator licenses.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation shall be posted at the place where the transmitter is located, so that all of the terms thereof are visible: *Provided, however,* That if the booster transmitter is operated by remote control and is located more than 20 miles from the primary station, the station license and other instruments of authorization shall be posted in the above-described manner at the transmitter of the primary station.

(b) The call letters and assigned channel of the primary station shall be displayed at the booster site on the structure supporting the transmitting antenna so as to be visible to a person standing on the ground at the booster transmitter site. The display shall be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition by the licensee.

(c) The original of each station operator license shall be posted at the place where he is on duty: *Provided, however,* That if the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by a representative of the Commission, a verification card (Form 758–F) is acceptable in lieu of the posting of such license: *Provided further, however,* That if the operator in charge holds a restricted radiotelephone operator permit of the card form (as distinguished from the diploma form), he shall not post that permit but shall keep it in his personal possession.

§ 74.866 Operator requirements.

(a) The actual operation of the transmitting apparatus at a television broadcast booster station shall be carried on only by a person holding a valid first or second class radiotelephone operator license: *Provided, however,* That where the booster transmitter is remotely controlled by the transmission of coded signals from the primary station, an unlicensed person may turn the power supplied to the booster by the power mains, on and off upon instructions from the operator on duty at the primary station.

(b) The licensed operator on duty and in charge of a television broadcast booster station may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the television broadcast booster station.

(Sec. 318, 48 Stat. 1089, as amended by sec. 1, 74 Stat. 363; 47 U.S.C. 318) [28 F.R. 13727, Dec. 14, 1963; 37 F.R. 19615, Sept. 21, 1972]

§ 74.867 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter set forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

[33 F.R. 19821, Dec. 27, 1968]

§ 74.868 Additional orders.

In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders, in each case as may be deemed necessary.

§ 74.869 Copies of rules.

The licensee of a television broadcast booster station shall have current copies of Part 73 and Part 74, and in cases where antenna marking is required, Part 17 of this chapter, available for use by the operator in charge, and is expected to be familiar with those rules relating to the operation of a television broadcast booster station. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402, at nominal cost.

OTHER OPERATING REQUIREMENTS

§ 74.881 Logs.

(a) The licensee of a television broadcast booster station shall maintain an operating log showing the following:

(1) Hours of operation.

(2) A record of all repairs, adjustments, maintenance, tests, and equipment changes, showing the date of such events, the name and qualifications of the person performing the operation, and a brief description of the matter logged.

(b) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(c) The operating log shall be made available upon request to any authorized representative of the Commission.

(d) Station records shall be retained for a period of two years.

[28 F.R. 13727, Dec. 14, 1963, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 74.883 Station identification.

(a) Television broadcast booster stations will not be assigned individual call signs. Station identification will be accomplished by the retransmission of the call sign of the primary station.

(b) The Commission may request the operator on duty at the primary station to interrupt the transmissions of the booster station for short intervals of time in order to facilitate identification of a particular booster.

§ 74.884 Rebroadcasts.

(a) The term "rebroadcast" means the reception by radio of the programs or other signals of a radio or television station and the simultaneous or subsequent retransmission of such programs or signals for direct reception by the general public.

(b) A television broadcast booster station is authorized to rebroadcast only the signals of the primary station with which it is associated. In cases where the booster is located at a site where the signals of other television broadcast stations or other classes of stations may be received, care shall be exercised in the installation to insure that such other signals are not retransmitted: *Provided, however*, That occasional inadvertent retransmission of the signals of other co-channel TV stations, caused by abnormal propagation conditions, will not be considered to be noncompliance.

Subpart I—Instructional Television Fixed Service

SOURCE: The provisions of this Subpart I appear at 28 F.R. 13731, Dec. 14, 1963, unless otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 74.901 Definitions.

Attended operation. Operation of a station by a qualified operator on duty at the place where the transmitting apparatus is located with the transmitter in plain view of the operator.

Instructional telveision fixed station. A fixed station operated by an educational organization and used primarily for the transmission of visual and aural instructional, cultural, and other types of educational material to one or more fixed receiving locations.

ITFS response station. A fixed station operated at an authorized location to provide communication by voice and/or data signals to an associated instructional television fixed station.

Remote control. Operation of a station by a qualified operator on duty at a control position from which the transmitter is not visible but which control position is equipped with suitable control and telemetering circuits so that the essential functions that could be performed at the transmitter can also be performed from the control point.

Unattended operation. Operation of a station by automatic means whereby the transmitter is turned on and off and performs its functions without attention by a qualified operator.

[28 F.R. 13731, Dec. 14, 1963, as amended at 35 F.R. 4705, Mar. 18, 1970]

§ 74.902 Frequency assignments.

(a) The following frequencies may be assigned to instructional television fixed stations:

Group A		Group B		Group C		Group D	
Channel No.	Band limits Mc/s	Channel No.	Band limits Mc/s	Channel No.	Band limits Mc/s	Channel No.	Band limits Mc/s
A-1	2500-2506	B-1	2506-2512	C-1	2548-2554	D-1	2554-2560
A-2	2512-2518	B-2	2518-2524	C-2	2560-2566	D-2	2566-2572
A-3	2524-2530	B-3	2530-2536	C-3	2572-2578	D-3	2578-2584
A-4	2536-2542	B-4	2542-2548	C-4	2584-2590	D-4	2590-2596

Group E		Group F		Group G	
Channel No.	Band limits Mc/s	Channel No.	Band limits Mc/s	Channel No.	Band limits Mc/s
E-1	2596-2602	F-1	2602-2608	G-1	2644-2650
E-2	2608-2614	F-2	2614-2620	G-2	2656-2662
E-3	2620-2626	F-3	2626-2632	G-3	2668-2674
E-4	2632-2638	F-4	2638-2644	G-4	2680-2686

(b) Instructional Television Fixed Stations authorized to operate on Channels 2650–2656, 2662–2668, and 2674–2680 MHz as of July 16, 1971, may continue to operate on a coequal basis with other stations operating in accordance with the Table of Frequency Allocations. Requests for subsequent renewals or modification of existing licenses will be considered; however, expansion of systems comprised of such stations will not be permitted except on frequencies allocated for the service.

(c) A licensee is limited to the assignment of no more than four channels for use in a single area of operation, all of which must be selected from the same Group listed in paragraph (a) of this section. An area of operation is defined as the area in which the use of channels by one licensee precludes their use by other licensees. Applicants shall not apply for more channels than they intend to construct within a reasonable time, simply for the purpose of reserving additional channels. Applicants applying for more than one channel shall submit to the Commission a plan indicating when they intend to begin and complete construction of each channel applied for, and the Commission will determine whether or not a grant of the channels requested would serve the public interest. Applicants initially proposing the operation of less than four transmitters may request that the remaining channels in the same Group be reserved for future expansion of the system. The Commission will undertake to avoid assigning the remaining channels in the Group to other applicants as long as such action is feasible in the judgment of the Commission. The provision for a maximum of four channels to a single licensee shall not be construed as a guarantee that four channels will be assigned.

(d) The same channel may be assigned to more than one station or more than one licensee in the same area if the geometric arrangement of the transmitting and receiving points or the times of operation are such that interference is not likely to occur.

[29 F.R. 7023, May 28, 1964, as amended at 31 F.R. 10743, Aug. 12, 1966; 36 F.R. 11587, June 16, 1971]

§ 74.903 Interference.

(a) Since interference in this service will occur only when an unfavorable desired-to-undesired signal ratio exists at the antenna input terminals of the affected receiver, the directive properties of receiving antennas can be used to minimize the hazard of such interference. Interference may also be controlled through the use of directive transmitting antennas, geometric arrangement of transmitters and receivers, and the use of the minimum power required to provide the needed service.

(b) An applicant for a new instructional television fixed station is expected to take full advantage of such techniques to prevent interference to the reception of any existing operational fixed, international control station or instructional television fixed station at authorized receiving locations. In cases where it can be demonstrated that potential interference could be effectively controlled with practical refinements at such existing receiving locations, the user of the receiving installation is expected to make the needed refinements if intereference-free reception is desired.

(c) Existing licensees and prospective applicants are expected to cooperate fully in attempting to resolve problems of potential interference before bringing the matter to the attention of the Commission.

ADMINISTRATIVE PROCEDURE

§ 74.911 Cross reference.

See §§ 74.11 to 74.16.

LICENSING POLICIES AND GENERAL OPERATING REQUIREMENTS

§ 74.931 Purpose and permissible service.

(a) Instructional television fixed stations are intended primarily to provide a means for the transmission of instructional and cultural material in visual form with an associated aural channel to specified receiving locations for the primary purpose of providing a formal education and cultural development to students enrolled in accredited public and private schools, colleges, and universities.

(b) Such stations may also be used for the additional purpose of transmitting visual and aural material to selected receiving locations for in-service training and instruction in special skills and safety programs, extension of professional training, informing persons and groups engaged in professional and technical activities of current developments in their particular fields, and other similar endeavors.

(c) During periods when the circuits provided by these stations are not being used for the transmission of instructional and cultural material, they may be used for the transmission of material directly related to the administrative activities of the licensee such as the holding of conferences with personnel, distribution of reports and assignments, exchange of data and statistics, and other similar uses. Stations will not be licensed in this service solely for the transmission of administrative traffic.

(d) Stations may be licensed in this service for operation as relay stations to interconnect instructional television fixed station systems in adjacent areas, to deliver instructional and cultural material to and obtain such material from, commercial and noncommercial educational television broadcast stations for use on the instructional television fixed system, and to deliver instructional and cultural material to, and obtain such material from, nearby terminals or connection points of closed circuit educational television systems employing wired distribution systems or radio facilities authorized under other parts of this chapter.

(e) Material transmitted by these stations may be intended for simultaneous reception and display or may be recorded for use at a later time.

[28 F.R. 13731, Dec. 14, 1963, as amended at 33 F.R. 15424, Oct. 17, 1968]

§ 74.932 Eligibility and licensing requirements.

(a) A license for an instructional television fixed station will be issued only to an institutional or governmental organization engaged in the formal education of enrolled students or to a nonprofit organization formed for the purpose of providing instructional television material to such institutional or governmental organizations, and which is otherwise qualified under the statutory provisions of the Communications Act of 1934, as amended. A nonprofit organization which would be eligible for a license for a noncommercial educational television broadcast station is considered to be eligible for a license for an instructional television fixed station.

(1) In determining the eligibility of publicly supported educational organizations, the accreditation of the appropriate state department of education will be taken into consideration.

(2) In determining the eligibility of privately controlled educational organizations, the accreditation of the appropriate state department of education or the recognized regional and national accrediting organizations will be taken into consideration.

(b) No numerical limit is placed on the number of stations which may be licensed to a single licensee. However, individual licensees will be governed by the limitation of § 74.902 as to the number of channels which may be used. A single license may be issued for more than one transmitter if they are to be located at a common site and operated by the same licensee. Applicants are expected to accomplish the proposed operation by the use of the smallest number of channels required to provide the needed service.

(c) An application for a new instructional television fixed station or for changes in the facilities of an existing station shall specify the location of the transmitter, all proposed receiving installations, response transmitters, and any relay transmitters which will be under the control of or will be equipped for reception by the applicant. If reception is also intended at unspecified locations, i.e., if power is deliberately radiated to locations or areas so that voluntary reception will be possible, the applications shall include a complete statement as to the purpose of such additional reception.

[28 F.R. 13731, Dec. 14, 1963, as amended at 36 F.R. 8873, May 14, 1971]

§ 74.933 Remote control operation.

(a) An instructional television fixed station may be operated by remote control if the following conditions are met:

(1) The transmitter and associated control system shall be installed and protected in a manner designed to prevent tampering or operation by unauthorized persons.

(2) An operator meeting the requirements of § 74.966 shall be on duty at the remote control position and in actual charge thereof at all times when the station is in operation.

(3) Facilities shall be provided at the control position which will permit the operator to turn the transmitter on and off at will. The control position shall also be equipped with devices suitable for observing the overall characteristics of the transmissions and a carrier-operated device which will give a continuous visual indication whenever the transmitting antenna is radiating a signal. The transmitting apparatus shall be inspected as often as may be necessary to insure proper operation and in any event at least once a day.

(4) The control circuits shall be so designed and installed that short circuits, open circuits, other line faults, or any other cause which would result in loss of control of the transmitter, will automatically cause the transmitter to cease radiating.

(b) An application for authority to construct a new station or to make changes in the facilities of an existing station and which proposes operation by remote control shall include an adequate showing of the manner of compliance with the requirements of this section.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318) [28 F.R. 13731, Dec. 14, 1963, as amended at 36 F.R. 8873, May 14, 1971]

§ 74.934 Unattended operation.

(a) Unattended operation of an instructional television fixed station will be permitted only when it is used for relaying the signals of another station which is employing the transmission standards specified for stations operating in this service and then only if the following requirements are met:

(1) The transmitter shall be equipped with automatic circuits which will permit it to radiate only when a signal on the channel which it is intended to retransmit is present at the input terminals of the apparatus. The automatic circuit may be provided with a reasonable time-delay factor to prevent the transmitter from being turned off during momentary failures of the incoming signal.

(2) The transmitter shall accomplish the relaying of the incoming signal by direct heterodyne frequency conversion to a different channel, or linear amplification of the incoming signal. The use of a common oscillator to convert the incoming signal to a low frequency for amplification and to reconvert it to its original channel will be considered to be the same as linear amplification. In cases where frequency conversion to a different channel is employed, the electrical characteristics of the incoming signal when retransmitted shall not be significantly altered except as to frequency and amplitude. In cases where linear amplification is employed, the electrical characteristics of the incoming

signal when retransmitted shall not be significantly altered except as to amplitude. Care shall be taken in the design and installation of an unattended relay station to prevent instability which could result in spurious or other unwanted radiation.

(3) If the transmitting apparatus is located at a site which is not readily accessible at all hours and in all seasons, means shall be provided for turning the transmitter on and off at will from a location which can be reached promptly at all hours and in all seasons.

(4) The transmitter and any associated control circuits shall be installed and protected in a manner designed to prevent tampering or operation by unauthorized persons.

(5) Where the antenna supporting structure of an unattended station is required to have aeronautical hazard markings pursuant to the provisions of Part 17 of this chapter, the licensee shall provide for inspection and logging of observations of such markings as required by §§ 17.47 and 17.49 of this chapter.

(b) An application for authority to construct a new station or to make changes in the facilities of an existing station and which proposes unattended operation shall include an adequate showing as to the manner of compliance with the requirements of this section.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318) [28 F.R. 13731, Dec. 14, 1963, as amended at 36 F.R. 8873, May 14, 1971]

§ 74.935 Power limitations.

(a) The power of an instructional television fixed station will be limited to that required to perform the proposed service. Applicants are expected to take full advantage of the power-concentrating properties of directive transmitting antennas and the collective properties of directive receiving antennas to provide the needed service.

(b) An application for a new instructional television fixed station or for changes in the facilities of an existing station proposing a peak visual power output from the transmitter in excess of 10 watts shall include a showing as to the distance and direction to each specified receiving point, the elevation above ground and the power gain of each receiving antenna at such receiving points, the vertical and horizontal directive patterns of the proposed transmitting antenna system in terms of power gain, the elevation of the transmitting antenna above ground and the nature of significant terrain features over the transmission path or paths.

(c) The operating power (peak visual) of an instructional television fixed station shall not be permitted to exceed the authorized power by more than 10 percent at any time.

(d) The transmitter power output of the aural signal shall not be more than 70 percent nor less than 10 percent of the peak power output of the visual signal.

§ 74.936 Emissions and bandwidth.

(a) An instrutional television fixed station shall normally employ amplitude modulation (A5) for the transmission of the visual signal and frequency modulation (F3) for the transmission of the aural signal.

(b) The average power of radio frequency harmonics of the visual and aural carriers, measured at the output terminals of the transmitter, shall be attenuated no less than 60 decibels below the peak visual output power within the assigned channel. All other emissions appearing on frequencies more than 3 Mc/s above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

(1) 30 decibels for transmitters rated at less than 10 watts visual peak power output.

(2) 40 decibels for transmitters rated at 10 watts or more visual peak power output.

(c) Should interference occur as the result of emissions outside the assigned channel, greater attenuation may be required.

§ 74.937 Antennas.

(a) In order to minimize the hazard of harmful interference from other stations, directive receiving antennas should be used at all receiving points. The choice of receiving antennas is left to the discretion of the licensee. However, should interference occur and it can be demonstrated that such interference could be eliminated through the use of a more suitable yet practical directive receiving antenna, the licensee of the station causing the interference is absolved of the responsibility of correcting the interference condition.

(b) Directive transmitting antennas shall be used wherever feasible so as to minimize the hazard of harmful interference to other licensees. The radiation pattern shall be designed to minimize radiation in directions where no reception is intended.

(c) In selecting a location for the transmitting antenna, it should be borne in mind that interference to the reception of its transmission is most likely to come from the direction in which receiving antennas must be aimed to receive its transmissions. Whenever possible the location should be chosen so that the receiving antennas in its system are aimed in directions from which interfering signals are least likely to come.

(d) The use of elevated receiving antennas is preferable to the use of elevated transmitting antennas or greater power to provide the desired service.

(e) The use of vertical or horizontal plane polarization or right-hand or left-hand rotating (circular) polarization may be used to minimize the hazard of harmful interference between systems. The Commission reserves the right to specify the polarization to be used.

(f) The power gain compared to an isotropic antenna and the directive properties of the transmitting and receiving antennas proposed to be employed, as well as the geometric distribution of the transmitting and receiving points, shall be supplied with each application for a new educational television fixed station or for changes in the antenna facilities of an existing station.

§ 74.938 Transmission standards.

(a) Except as otherwise provided in this section, the transmission standards employed by television broadcast stations and set forth in § 73.682 of this chapter shall apply to instructional television fixed stations.

(b) Instructional television fixed stations are not required to attenuate the lower sideband by any specified amount unless interference to the reception of another station results from emissions in excess of those permitted television broadcast stations, in which case the attenuation specified in § 73.687(a)(3) of this chapter shall apply. However, in no case shall the amplitude of any lower sideband component exceed the amplitude of the upper sideband component having the highest amplitude.

(c) The visual transmission amplitude characteristics may vary from those specified in § 73.682 of this chapter to the extent that such variations result from permissible lower sideband radiation. Care should be exercised in the adjustment of the transmitter to insure correct overall response of the transmitter for transmission of the upper and vestigial lower sideband.

(d) The provisions of § 74.937 in lieu of § 73.682(a)(14) of this chapter apply with respect to polarization of the radiated signal.

(e) The provisions of § 74.935(d) in lieu of § 73.682(a)(15) of this chapter apply with respect to the ratio of visual to aural power.

§ 74.939 Special rules governing ITFS response stations.

(a) An ITFS response station is authorized to provide communication by voice and/or data signals with its associated instructional television fixed station for use in instructional or computer-assisted communications. Other communications concerning the technical operation of the system may be carried on when necessary.

(b) An ITFS response station may be operated only by the licensee of an instructional television fixed station and only at an authorized receiving location of the instructional television fixed station with which it communicates. More than one ITFS response station may be operated at the same or different locations by the same licensee. An application for authority to operate a new or modified response station shall be filed with the Commission in Washington, D.C., on FCC Form 330P. Section VI of that form shall supply the following information for each response station:

(1) The name of the school or other description of the building in which the ITFS response station will be located, the address, and the geographic coordinates of the ITFS response station transmitting antenna.

(2) The manufacturer's name, type number, operating frequency, and power output of the proposed ITFS response station transmitter.

(3) The type of transmitting antenna, power gain, and azimuthal orientation of the major lobe of radiation in degrees measured clockwise from True North.

(4) A sketch giving pertinent details of the ITFS response station transmitting antenna installation including ground elevation of the transmitter site above mean sea level; overall height above ground, including appurtenances, of any ground-mounted tower or mast on which the transmitting antenna will be mount-

ed or, if the tower or mast is or will be located on an existing building or other manmade structure, the separate heights above ground of the building and the tower or mast including appurtenances; the location of the tower or mast on the building; the location of the transmitting antenna on the tower or mast; and the overall height of the transmitting antenna above ground. This can be combined with the sketch for the receiving location if the transmitting antenna is clearly shown.

(c) See Part 17 of this chapter concerning notification to the Federal Aviation Administration of proposed antenna construction or alteration. The provisions of §§ 74.967 and 74.981(a)(5), concerning antenna painting and lighting requirements, apply to ITFS response stations as well as main ITFS stations.

(d) All ITFS response stations communicating with a single instructional television fixed station shall operate on the same frequency. The specified frequency which may be used is determined by the channel assigned to the instructional television fixed station with which it is communicating, as shown in the following table. Operation on other ITFS response channels is prohibited.

ITFS Channel No.	Response Frequency (MHz)	ITFS Channel No.	Response Frequency (MHz)
A-1	2686.0625	D-3	2688.4375
A-2	2687.0625	D-4	2689.4375
A-3	2688.0625	E-1	2686.5625
A-4	2689.0625	E-2	2687.5625
B-1	2686.1875	E-3	2688.5625
B-2	2687.1875	E-4	2689.5625
B-3	2688.1875	F-1	2686.6875
B-4	2689.1875	F-2	2687.6875
C-1	2686.3125	F-3	2688.6875
C-2	2687.3125	F-4	2689.6875
C-3	2688.3125	G-1	2686.8125
C-4	2689.3125	G-2	2687.8125
D-1	2686.4375	G-3	2688.8125
D-2	2687.4375	G-4	2689.8125

(e) Transmitter power output will normally be limited to no more than 250 milliwatts. Upon a special showing of need, transmitter power output of up to 2 watts may be permitted.

(f) The channels assigned to ITFS response stations are 125 kHz in width. The assigned frequency is at the center of the channel. Either frequency or amplitude modulation may be employed. If amplitude modulation is used, the carrier shall not be modulated in excess of 100 percent. If frequency modulation is employed, the maximum carrier excursion resulting from modulation shall not be greater than 25 kHz above and below the unmodulated carrier frequency. Any excursion appearing outside the authorized channel, including radio frequency harmonics, shall be attenuated no less than 60 decibels below the peak power of the unmodulated carrier. Greater attenuation may be required if interference is caused by out-of-band emissions.

(g) The unmodulated carrier frequency shall be maintained within 35 kHz of the assigned frequency at all times. Adequate means shall be provided to insure compliance with this rule.

(h) A directive transmitting antenna shall be employed, oriented toward the transmitter site of the associated instructional television fixed station. The beamwidth between half power points shall not exceed 15° and radiation in any minor lobe of the antenna radiation pattern shall be at least 20 decibels below the power in the main lobe of radiation.

(i) The transmitter of an ITFS response station may be operated unattended provided that the transmissions are observed by the operator on duty at the associated instructional television fixed station, who shall take such steps as may be necessary to correct any condition of improper operation. The overall performance of the ITFS response station transmitter shall be checked as often as is necessary to insure that it is functioning in accordance with the requirements of the Commission rules and in any case, at intervals of no more than 1 month. An entry shall be made in the operating log giving the date and results of these checks. The licensee of an ITFS response station is responsible for the proper operation of the transmitter at all times. The transmitter shall be installed and protected in such manner as to prevent tampering or operation by unauthorized persons.

(j) After approval by the Commission the original of the authorization shall be posted at the ITFS station and a legible photocopy of the appropriate page of section VI of Form 330P shall be posted at or attached to each response transmitter.

(k) The transmitting apparatus employed at ITFS response stations shall have received type acceptance in accordance with § 74.952.

(l) An ITFS response station shall be operated only when engaged in communication with its associated instructional television fixed station or for necessary equipment or system tests and adjustments. Radiation of an unmodulated carrier and other unnecessary transmissions are forbidden.

(m) The requirements of § 74.981 apply with regard to logging requirements.

(n) Individual call signs will not be assigned to ITFS response stations. It is assumed that in normal usage the location and identity of an ITFS response station can be determined by the content of its communications. If such is not the case, provision shall be made to announce the location at intervals of no more than one-half hour whenever the transmitter is being operated.

[34 F.R. 12101, July 18, 1969, as amended at 35 F.R. 4705, Mar. 18, 1970; 36 F.R. 11587, June 16, 1971]

EQUIPMENT

§ 74.950 Equipment performance and installation.

(a) Except as otherwise provided in this section, the requirements of § 73.687 of this chapter regarding the installation and performance of television broadcast transmitters and associated equipment shall apply to instructional television fixed stations.

(b) The overall attenuation characteristics of the transmitter may vary from those specified in § 73.687 of this chapter to the extent that such variations result from permissible lower sideband radiation. However, care should be exercised in the adjustment of the transmitter to insure correct overall response of the transmitter for proper transmission of the upper and vestigial lower sideband.

(c) The provisions of § 74.961 in lieu of § 73.687(c)(1) of this chapter apply with respect to the frequency tolerance for the visual carrier.

(d) The provisions of § 74.936 in lieu of § 73.687(i)(1) of this chapter apply with respect to spurious emissions and radio frequency harmonics.

(e) The requirements of § 73.687(c)(2) of this chapter will be considered to be met insofar as measurements of operating power are concerned, if the transmitter is equipped with instruments for determining the combined visual and aural operating power. However, licensees are expected to maintain the operating powers within the limits specified in the rules of this part. Measurements of the separate visual and aural operating powers should be made at sufficiently frequent intervals to insure compliance with the rules and in no event less often than once a month.

(f) Transmitting apparatus (translators and boosters) used solely for relaying signals received from other ITFS stations and operating in the manner described in § 74.934(a)(2) shall meet the following requirements before being type accepted by the Commission.

(1) The frequency converter and associated amplifiers shall be so designed that the electrical characteristics of a standard television signal introduced into the input terminals will not be significantly altered by passage through the apparatus except as to frequency and amplitude. The overall response of the apparatus within its assigned channel when operating at its rated power output and measured at the output terminals, shall provide a smooth curve, varying within limits separated by no more than 4 decibels: *Provided, however,* That means may be provided to reduce the amplitude of the aural carrier below those limits, if necessary to prevent intermodulation which would mar the quality of the retransmitted picture or result in emissions outside of the assigned channel.

(2) The suppression of emissions appearing outside of the assigned channel shall comply with § 74.936 (b) and (c).

(3) The local oscillator employed in the frequency converter shall maintain its operating frequency within 0.02 percent of its rated frequency when subjected to variations in ambient temperature between minus 30° and plus 50° centigrade and variations in powerline voltage between 85 percent and 115 percent of the rated supply voltage.

(4) The apparatus shall contain automatic circuits which will maintain peak visual power output constant within 2 decibels when the strength of the input signal is varied over a range of 30 decibels and which will not permit the peak visual power output to exceed the maximum rated power output under any conditions. If a manual adjustment is provided to compensate for different average signal intensities, provision shall be made for determining the proper setting for the control. If improper adjustment of the control could result in improper operation a label bearing a

suitable warning shall be affixed at the adjustment control: *Provided, however,* That apparatus with an output of 50 milliwatts peak visual power per channel or less need not comply with this paragraph, provided the equipment is so designed that the rated output power of the transmitter cannot be exceeded by more than 3 dB by an increase in the input signal.

(5) The apparatus shall be equipped with automatic controls which will place it in a nonradiating condition when no signal is being received on the input channel, either due to absence of a transmitted signal or failure of the receiving portion of the relay transmitter. In the case of equipment (translators or boosters) of 50 milliwatts peak visual power per channel or less relaying more than one channel it shall be turned off in the absence of the last signal to be relayed. The automatic control may include a time delay feature to prevent interruptions in the operation of the relay transmitter caused by fading or other momentary failures of the incoming signal.

(6) The tube(s) or transistor(s) employed in the final radio frequency amplifier shall be of the appropriate power rating to provide the rated power output of the relay transmitter. The normal operating constants for operation at the rated power output shall be specified. The apparatus shall be equipped with suitable meters or meter jacks so that appropriate voltage and current measurements may be made while the apparatus is in operation.

(7) Boosters used in this service shall comply with all the provisions of this paragraph except with subparagraph (3). However, in addition, the isolation between the input and output circuits of the booster, including the receiving and transmitting antenna systems shall be at least 20 decibels greater than the maximum overall gain of the booster amplifier. Boosters may use opposite antenna polarization of the input and output antennas.

[28 F.R. 13731, Dec. 14, 1963, as amended at 36 F.R. 8873, May 14, 1971]

§ 74.951 Equipment changes.

(a) Formal application (FCC Form 330P) is required for any of the following changes:

(1) Replacement of the transmitter as a whole, except replacement with a transmitter of the identical power rating which has been type accepted by the Commission for use by instructional television fixed stations, or any change in equipment which could result in a change in the electrical characteristics or performance of the station. In cases where such a replacement of transmitter is made, the Commission and the Engineer in Charge of the radio district in which the station is located shall be notified in writing 3 days after the date of installation of the replacement transmitter. The notification shall give the name of the manufacturer and type number of the transmitter, and shall include a certification by the licensee that the new installation complies in all respects with the technical requirements of this subpart, and that it complies with the technical requirements of the station's authorization or application.

(2) Any change in the transmitting antenna system, including the direction of radiation, directive pattern, antenna gain, or transmission line.

(3) Any change in the height of the antenna above ground or any horizontal change in the location of the antenna in excess of 500 feet.

(4) Any change in the transmitter control system.

(5) Any change in the location of the transmitter except a move within the same building or upon the same tower or pole.

(6) Any change of frequency assignment.

(7) Any change of authorized operating power.

(b) Other equipment changes not specifically referred to in paragraph (a) of this section may be made at the discretion of the licensee, provided that the Engineer in Charge of the radio district in which the station is located and the Commission in Washington, D.C., are notified in writing upon the completion of such changes and provided further, that the changes are appropriately reflected in the next application for renewal of license of the station.

[28 F.R. 13731, Dec. 14, 1963, as amended at 33 F.R. 19016, Dec. 20, 1968]

§ 74.952 Acceptability of equipment for licensing.

(a) Transmitters employed in this service must have type acceptance by the Commission. Type acceptance may be given under either of the following conditions:

(1) A transmitter or translator may be type accepted upon the request of any

manufacturer of such equipment built in quantity by following the type acceptance procedure set forth in Part 2 of this chapter, provided that the date and information submitted indicate that the equipment meets all technical requirements applicable to this service. If accepted, such transmitting equipment will be included on the Commission's "Radio Equipment List, Part C, Equipment Acceptable for Licensing in the Radio Services Other than Broadcast." Applicants specifying equipment included on such a list need not submit detailed descriptions and diagrams where the correct type number is specified, provided that the equipment proposed is identical with that accepted. Copies of the Radio Equipment List, Part C, are available for inspection at the Commission's office in Washington, D.C., and at each of its field offices.

(2) An application specifying a transmitter or translator not included on the Radio Equipment List, Part C, may be accepted upon the request of a prospective licensee submitting, with the application for construction permit, a complete description of the equipment, including the circuit diagram, listing of all tubes used, function of each, multiplication in each stage, plate current and voltage applied to each tube, and a description of the oscillator circuit together with any devices installed for the purpose of frequency stabilization. However, if this data has been filed with the Commission by a manufacturer in connection with a request for type acceptance, it need not be submitted with the application for construction permit but may be referred to as "on file." Measurement data for type acceptance made in accordance with subparagraph (1) of this paragraph shall be submitted with the license application.

(b) Additional rules with respect to withdrawal of type acceptance, modification of type accepted equipment, and limitations on the findings upon which type acceptance is based are set forth in Part 2 of this chapter.

TECHNICAL OPERATION AND OPERATORS

§ 74.961 Frequency tolerance.

(a) The frequency of the visual carrier shall be maintained within 60 kilocycles of the assigned frequency at all times when the station is in operation.

(b) The frequency of the aural carrier shall be maintained in accordance with the provisions of § 73.687(c)(1) of this chapter.

§ 74.962 Frequency monitors and measurements.

(a) Suitable means shall be provided to insure that the operating frequencies of the station are within the prescribed tolerances.

(b) The operating frequencies shall be checked as often as is necessary to insure that they are within the prescribed tolerances at all times and in all cases the operating frequencies shall be checked at intervals of no more than 1 month.

(c) A determination of the operating frequencies of the visual and aural carriers may be made by measuring any exact submultiple of the actual output frequency. Any crude but suitable device, including a roughly calibrated receiver, may be used to determine that the output frequency is the correct multiple of the frequency controlling element in the transmitter.

§ 74.963 Time of operation.

(a) An instructional television fixed station is not required to adhere to any regular schedule of operation. Unless otherwise specified in the license, the hours of operation are not limited.

(b) Except for purposes of tests and adjustments, the transmitter shall not be permitted to radiate unmodulated carriers or otherwise make unnecessary transmissions for extended periods of time.

§ 74.964 Station inspection.

The station and all records required to be kept by the licensee shall be made available for inspection upon request by any authorized representative of the Commission.

§ 74.965 Posting of station and operator licenses.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation shall be posted at the place where the transmitter is located, so that all terms thereof are visible, except as otherwise provided in paragraphs (b) and (c) of this section.

(b) In cases where the transmitter is operated by remote control, the documents referred to in paragraph (a) of this section shall be posted in the manner described at the control point of the transmitter, and

(c) In cases where the transmitter is operated unattended, the name of the licensee and the call sign of the unattended station shall be displayed at the transmitter site on the structure supporting the transmitting antenna, so as to be visible to a person standing on the ground at the transmitter site. The display shall be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition at all times by the licensee. The station license and other documents referred to in paragraph (a) of this section shall be kept at the nearest attended station operated by the licensee of the unattended station or in cases where the licensee of the unattended station does not operate attended stations, at the point of destination of the signals relayed by the unattended station.

(d) The original of each station operator license shall be posted at the place where he is on duty: *Provided, however,* That if the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing the class of station and is there available for inspection by a representative of the Commission, a verification card (FCC Form 758–F) is acceptable in lieu of the posting of such license: *Provided further, however,* That if the operator on duty holds an operator permit of the card form (as distinguished from the diploma form), he shall not post that permit but shall keep it in his personal possession.

§ 74.966 Operator requirements.

(a) An instructional television fixed station, used for the origination of visual and aural program material or the transmitter of which is modulated with visual and aural program material received from other sources, shall not be operated unless there is one (or more) operators holding a valid radiotelephone first-class or second-class operator license or radiotelephone third-class operator permit, on duty at the place where the transmitter is located or at an authorized control point established pursuant to the provisions of § 74.933, and in actual charge thereof.

(b) Except when under the immediate supervision of a radiotelephone first-class or second-class operator, the radiotelephone third-class operator permit holder may perform only the following functions:

(1) Those necessary to turn the transmitter on and off.

(2) Such adjustments as may be made by means of external controls and which are necessary to maintain modulation of the transmitter within the prescribed limits.

(3) Such adjustments as may be made by means of external controls and which are necessary to compensate for fluctuations of the power supply voltage which would otherwise result in changes in the authorized operating power.

(4) Make routine meter readings and inspection of antenna hazard marking for logging purposes.

(c) In cases where a transmitter is operated unattended pursuant to the provisions of § 74.934, an operator of the grade specified in paragraph (a) of this section shall observe the transmissions at the receiving point for the station or some other suitable place where the transmissions of the unattended station can be observed, at intervals of no more than 1 hour whenever the station is in operation. Should any condition of improper operation be observed, immediate measures shall be instituted to correct the condition of improper operation.

(d) Any tests, adjustments, or repairs made while the transmitter is in operation and which require technical skill and knowledge to avoid improper operation, shall be made by or under the immediate supervision of an operator holding a valid radiotelephone first-class or second-class operator license.

(e) The licensed operator on duty and in charge of an instructional television fixed station may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator license or permit which he holds and the rules and regulations governing such stations. However, such duties shall in no way impair or impede the required supervision of the instructional television fixed station.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

§ 74.967 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter set forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

[33 F.R. 19821, Dec. 27, 1968]

§ 74.968 Additional orders.

In case the rules of this part do not cover all phases of operation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

§ 74.969 Copies of the rules.

The licensee of an instructional television fixed station shall have current copies of Parts 73 and 74, and in cases where aeronautical hazard marking of antennas is required, Part 17 of this chapter available for use by the operator in charge. Both the licensee and the operator or operators responsible for the proper operation of the station are expected to be familiar with the pertinent rules governing instructional television fixed stations.

§ 74.970 Modulation limits.

(a) *Visual transmitter.* The maximum excursion of the luminance signal in the white direction shall not exceed the value specified in § 73.682(a)(13) of this chapter for the reference white level.

(b) *Aural transmitter.* The maximum frequency swing of the aural carrier shall not be permitted to exceed ±25 kc/s on peaks of frequent occurrence during any transmission. This is defined as 100 percent modulation.

§ 74.971 Modulation monitors and measurements.

Suitable means shall be provided to insure that the modulation limits specified in § 74.970 are observed.

OTHER OPERATING REQUIREMENTS

§ 74.981 Logs.

(a) The licensee of an instructional television fixed station shall maintain an operating log showing the following:

(1) The date and time of the beginning of each period of operation of the transmitter.

(2) The date and time of any unscheduled interruptions to the transmissions of the station, the duration of such interruptions, and the causes thereof.

(3) The date and time of the end of each period of operation of the transmitter.

(4) A record of all repairs, adjustments, maintenance, tests, and equipment changes, showing the date and time of such events, the name and qualifications of the person or persons performing such tasks, and a brief description of the matter logged.

(5) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(b) The log entries shall be made by the person or persons competent to do so, having actual knowledge of the facts required, who shall sign the log when starting duty and again when going off duty.

(c) The log shall be kept in an orderly and legible manner, in suitable form, and in such detail that the data required are readily available. Key letters or abbreviations may be used if proper meaning or explanation is contained elsewhere in the log.

(d) No log or portion thereof shall be erased, obliterated, or willfully destroyed within the period of retention required by rule. Any necessary correction may be made only by the person who made the original entry who shall strike out the erroneous portion, initial the correction made, and show the date the correction was made.

(e) Operating logs shall be retained for a period of not less than 2 years. The Commission reserves the right to order, in individual cases, retention of logs for a longer period of time. In cases where the licensee has notice of any claim or complaint to which information contained in the log may be pertinent, the log shall be retained until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for the filing of suits upon such claims.

[28 F.R. 13731, Dec. 14, 1963, as amended at 33 F.R. 19821, Dec. 27, 1968]

§ 74.982 Station identification.

(a) Call signs for instructional television fixed stations will consist of three letters and two digits pursuant to the provisions of § 2.302 of this chapter relating to fixed stations.

(b) Except as otherwise provided in paragraphs (c) and (d) of this section, each instructional television fixed station shall transmit its call sign at the beginning and end of each period of operation and, during operation, on the hour. Visual or aural transmissions shall be employed.

(c) The hourly station identification announcement during operation may be deferred if it would interrupt a single consecutive demonstration, lecture, or other similar discourse or otherwise impair the continuity of a program in progress. In such cases the station identification announcement shall be made at the first normal break in the continuity of the program.

(d) In cases where an instructional television fixed station is operating as a relay for signals originating at some other station operated by the same licensee, its call sign shall be announced by the originating station at the times and in the manner prescribed in paragraph (b) of this section.

(e) Where an instructional television fixed station is operating as a relay for signals originating at a station operated by some other licensee, its call sign may be transmitted by the originating station, if suitable arrangements can be made with the other licensee, or means shall be provided for the transmission of the call sign by the relay transmitter itself. Low power relay stations, authorized by § 74.950(f)(4) will not be assigned individual call signs. Station identification will be accomplished by the retransmission of the call sign of the primary station.

[28 F.R. 13731, Dec. 14, 1963, as amended at 36 F.R. 8873, May 4, 1971]

§ 74.984 Retransmissions.

An instructional television fixed station may not retransmit the signals of any class of station without consent of the station originating the signals to be retransmitted.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325)

Subparts J—K [Reserved]

Subpart L—FM Broadcast Translator Stations and FM Broadcast Booster Stations

SOURCE: The provisions of this Subpart L appear at 35 F.R. 15388, Oct. 2, 1970, unless otherwise noted.

DEFINITIONS AND ALLOCATIONS OF FREQUENCIES

§ 74.1201 Definitions.

(a) *FM translator.* A station in the broadcasting service operated for the purpose of retransmitting the signals of an FM radio broadcast station or another FM broadcast translator station by means of direct frequency conversion and amplification of the incoming signals without significantly altering any characteristics of the incoming signal other than its frequency and amplitude, in order to provide FM broadcast service to the general public.

(b) *Commercial FM translator.* An FM broadcast translator station which rebroadcasts the signals of a commercial FM radio broadcast station.

(c) *Noncommercial FM translator.* An FM broadcast translator station which rebroadcasts the signals of a noncommercial educational FM radio broadcast station.

(d) *Primary station.* The FM radio broadcast station radiating the signals which are retransmitted by an FM broadcast translator station or an FM broadcast booster station.

(e) *FM radio broadcast station.* When used in this Subpart L, the term FM broadcast station or FM radio broadcast station refers to commercial and noncommercial educational FM radio broadcast stations as defined in § 2.1 of this chapter, unless the context indicates otherwise.

(f) *FM broadcast booster station.* A station in the broadcasting service operated for the sole purpose of retransmitting the signals of an FM radio broadcast station by amplifying and reradiating such signals which have been received directly through space from the FM radio broadcast station, without significantly altering any characteristic of the incoming signal other than its amplitude.

§ 74.1202 Frequency assignment.

(a) An applicant for a new FM broadcast translator station or for changes in the facilities of an authorized translator station shall endeavor to select a channel on which its operation is not likely to cause interference to the reception of other stations. The application must be specific with regard to the frequency requested. Only one output channel will be assigned to each translator station.

(b) Subject to compliance with all the requirements of this subpart, FM broadcast translators may be authorized to operate on the following FM channels regardless of whether they are assigned for local use in the FM Table of Assignments (§ 73.202(b) of this chapter):

(1) Commercial FM translators: Class A channels so designated in § 73.206(a)(1) of this chapter;

(2) Noncommercial FM translators: The channels available for noncommercial use under § 73.501 of this chapter;

(3) Channels 201–260 (88.1 MHz through 99.9 MHz) are allocated for government radio services and nongovernment fixed service in Alaska and these frequencies will not be assigned for use by FM translators in Alaska. Channels 251 through 300 (98.1 MHz through 107.9 MHz) are allocated for nonbroadcast use in Hawaii and these frequencies will not be assigned for use by FM translators in Hawaii.

(c) No minimum distance separation between FM translators operating on the same channel is specified. However, assignments which will obviously result in mutual interference between translators will not be made.

(d) Adjacent channel assignments will not be made to FM translators intended to serve all or part of the same area.

(e) An FM broadcast booster station will be assigned the channel assigned to its primary station.

§ 74.1203 Interference.

(a) FM translators will be authorized and permitted to continue to operate only where they cause no interference to the direct reception by the public of the off-the-air signals of any authorized broadcast station. FM translators shall not cause harmful interference to the transmissions of any other authorized radio station nor shall an FM translator cause interference to reception by a television broadcast translator station of its input signals. FM translator stations which may cause any such interference will not be authorized.

(b) Interference will be considered to occur whenever reception of a regularly used off-the-air signal by viewers or listeners is impaired by the signals radiated by the translator, regardless of the quality of such reception, the strength of the signals so used, or the channel on which the protected signal is transmitted.

(c) If interference cannot be promptly eliminated by the application of suitable techniques, operation of the offending translator shall be immediately suspended and shall not be resumed until the interference has been eliminated. Short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures. If a complainant refuses to permit the translator licensee to apply remedial techniques which demonstrably will eliminate the interference without impairment to the original reception, the licensee of the translator is absolved of further responsibility.

(d) It shall be the responsibility of the licensee of an FM translator station to correct any condition of interference which results from the radiation of radio frequency energy by its equipment on any frequency outside the assigned channel. Upon notice by the Commission to the station licensee or operator that such interference is being caused, the operation of the translator station shall be immediately suspended and shall not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions by the FM translator station; *Provided, however,* That short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

ADMINISTRATIVE PROCEDURE

§ 74.1211 Cross reference.

See §§ 74.11 to 74.16.

LICENSING POLICIES AND GENERAL OPERATING REQUIREMENTS

§ 74.1231 Purpose and permissible service.

(a) FM translators provide a means whereby the signals of FM broadcast stations may be retransmitted to areas in which direct reception of such FM broadcast stations is unsatisfactory due to distance or intervening terrain barriers.

(b) Except as provided in paragraphs (f) and (g) of this section, an FM translator may be used only for the purpose of retransmitting the signals of an FM broadcast station or another FM translator station which have been received directly through space, converted, and suitably amplified.

(c) The transmissions of each FM translator shall be intended for direct reception by the general public and any other use shall be incidental thereto. An FM translator shall not be operated solely for the purpose of relaying signals to one or more fixed received points for retransmission, distribution, or further relaying.

(d) The technical characteristics of the retransmitted signals shall not be deliberately altered so as to hinder reception on conventional FM broadcast receivers.

(e) An FM translator shall not deliberately retransmit the signals of any station other than the station it is authorized by license to retransmit. Precautions shall be taken to avoid unintentional retransmission of such other signals.

(f) A locally generated radio frequency signal similar to that of an FM broadcast station and modulated with aural information may be connected to the input terminals of an FM translator for the purpose of transmitting voice announcements. The radiofrequency signals shall be on the same channel as the normally used off-the-air signal being rebroadcast and the duration of such transmissions shall not exceed 20 seconds at intervals of no less than one hour. Connection of the locally generated signals shall be made automatically by means of a time-switch. The switching device shall be so designed that the translator input circuit will be returned to the off-the-air signal within 20 seconds. The apparatus used to generate the local signal that is used to modulate the FM translator must be capable of producing an aural signal which will provide acceptable reception on FM receivers designed for the transmission standards employed by FM broadcast stations. Before commencing originations authorized in this paragraph, the licensee of the translator shall furnish to the Commission a statement identifying the type-accepted transmitting apparatus proposed to be used for such local originations.

(g) The aural material transmitted as permitted in paragraph (f) of this section shall be limited to seeking or acknowledging financial support deemed necessary to the continued operation of the translator. Accordingly, such originations are limited to the soliciation of contributions toward defrayal of the costs of installation, operation, and maintenance of the translator or acknowledgments of financial support for those purposes. Such acknowledgments may include identification of the contributors, the size or nature of the contributions and advertising messages of contributors.

(h) FM broadcast booster stations provide a means whereby the licensee of an FM radio broadcast station may provide service to areas of low signal intensity in any region within the primary station's predicted 1 mv/m field strength contour. An FM broadcast booster station is authorized to retransmit only the signals of its primary station; it shall not retransmit the signals of any other station nor make independent transmissions: *Provided, however,* That locally generated signals may be used to excite the booster apparatus for the purpose of conducting tests and measurements essential to the proper installation and maintenance of the apparatus.

NOTE: In the case of an FM broadcast station authorized with facilities in excess of those specified by § 73.211 of this chapter, an FM booster station will only be authorized within the 1 mv/m contour as predicted on the basis of the maximum powers and heights set forth in that section for the applicable class of FM radio broadcast station concerned.

(i) The transmissions of an FM broadcast booster station shall be intended for direct reception by the general public. Such stations will not be authorized to establish a point-to-point FM radio relay system.

§ 74.1232 Eligibility and licensing requirements.

(a) Subject to the restrictions set forth in paragraph (d) of this section, a license for an FM broadcast translator station may be issued to any qualified individual, organized group of individuals, broadcast station licensee, or local civil governmental body, upon an appropriate showing that plans for financing the installation and operation of the translator are sufficiently sound to assure prompt construction of the translator and dependable service.

(b) More than one FM translator may be licensed to the same applicant, whether or not such translators serve substantially the same area, upon an appropriate showing of need for such additional stations. FM translators are not counted as FM stations for the purposes of § 73.240 of this chapter, concerning multiple ownership.

(c) Only one input and one output channel will be assigned to each FM translator. Additional FM translators may be authorized to provide additional reception. A separate application is required for each FM translator and each application shall be complete in all respects.

(d) An authorization for a commercial FM translator which is intended to provide reception to places which are beyond the predicted 1 mv/m field strength contour of the primary station and within the predicted 1 mv/m field strength contour of another commercial FM radio broadcast station assigned to a different principal community will not be granted to:

(1) The licensee or permittee of an FM radio broadcast station, or

(2) An applicant who receives from such FM radio broadcast station licensee or permittee or from any person associated therewith, directly or indirectly, any financial support or contribution toward the costs incurred up to the time such translator commences operation.

NOTE 1: The 1 mv/m field strength contour of an FM radio broadcast station, for the purposes of this subpart, shall be the contour as predicted in accordance with § 73.313 (a) through (d) of this chapter. See Note, § 74.1231(h).

NOTE 2: Financial support prohibited in paragraph (d) includes only support for the preparation, filing and prosecution of applications for new FM translators, for the acquisition and installation of transmitting and other apparatus employed by such FM translators, and for the defrayal of any other costs necessary to placing such FM translators in operation. Paragraph (d) thus will not bar or limit contributions or support, by any station licensee or permittee or any person associated therewith, for the operation or maintenance of an FM translator, whether such support is provided in the form of financial contributions or by providing operation or maintenance services or advice.

(e) An FM broadcast booster station will be authorized only to the licensee or permittee of the FM radio broadcast station whose signals the booster station will retransmit, to serve areas within the predicted 1 mv/m field strength contour of the primary station, subject to Note, § 74.1231(h).

(f) No numerical limit is placed upon the number of FM booster stations which may be licensed to a single licensee. A separate application is required for each FM booster station. FM broadcast booster stations are not counted as FM broadcast stations for the purposes of § 73.240 of this chapter, concerning multiple ownership.

(g) Each application for an FM broadcast booster station shall include a statement concerning the steps which have been taken in the design and location of the equipment to insure that areas of service from the primary FM station will not be degraded by operation of the FM booster station.

§ 74.1234 Unattended operation.

(a) A station authorized under this subpart may be operated without a licensed radio operator in attendance if the following requirements are met:

(1) If the transmitter site cannot be reached promptly at all hours and in all seasons, means shall be provided so that the transmitting apparatus can be turned on and off at will from a point which is readily accessible at all hours and in all seasons.

(2) The transmitter shall also be equipped with suitable automatic circuits which will place it in a nonradiating condition in the absence of a signal on the input channel.

(3) The on-and-off control (if at a location other than the transmitter site) and the transmitting apparatus, shall be adequately protected against tampering by unauthorized persons.

(4) The Commission shall be supplied with the name, address, and telephone number of a person or persons who may be contacted to secure suspension of operation of the translator within thirty (30) minutes should such action be deemed necessary by the Commission. Such information shall be kept current by the licensee.

(5) Where the antenna and supporting structure are required to be painted and lighted under the provisions of Part 17 of this chapter, the licensee shall make suitable arrangements for the daily inspection and logging of the obstruction lighting and associated control equipment as required by §§ 17.47, 17.48, and 17.49 of this chapter.

(b) An application for authority to construct a new station pursuant to this subpart or to make changes in the facilities of such a station, which proposes unattended operation shall include an adequate showing as to the manner of compliance with this section.

(c) Unless the applicant specifically requests unattended operation and makes the showing required by paragraph (b) of this section, a licensed radio operator meeting the requirements of § 74.1266 shall be on duty at the transmitter site whenever the station is operated.

[35 F.R. 15388, Oct. 2, 1970, as amended at 37 F.R. 18540, Sept. 13, 1972]

§ 74.1235 Power limitations.

(a) The power output of the final radio frequency amplifier of a station authorized under this subpart shall not exceed 10 watts, except that FM broadcast translator stations serving areas east of the Mississippi River or in Zone I–A shall be limited to 1 watt. This power may be fed into a single transmitting antenna or may be divided between two or more transmitting antennas or antenna arrays in any manner found useful or desirable by the licensee. In individual cases, the Commission may authorize the use of more than one final radio frequency amplifier at a single station under the following conditions:

(1) Each such amplifier shall be used to serve a different community or area. More than one final radiofrequency amplifier will not be authorized to provide service to all or a part of the same community or area.

(2) Each final radiofrequency amplifier shall feed a separate transmitting antenna or antenna array. The transmitting antennas or antenna arrays shall be so designed and installed that the outputs of the separate radiofrequency amplifiers will not combine to reinforce the signals radiated by the separate antennas or otherwise achieve the effect of radiated power in any direction in excess of that which could be obtained with a single antenna of the same design fed by a radiofrequency amplifier with power output no greater than that authorized pursuant to this paragraph.

NOTE: The provisions of §§ 74.1235(a) (1) and (2) will not apply to 1-watt stations serving areas west of the Mississippi River outside of Zone I–A. See § 73.205(b) of this chapter.

(3) Stations authorized under this subpart employing multiple radiofrequency amplifiers will be licensed as a single station.

(4) No limit is placed upon the effective radiated power which may be obtained by the use of horizontally or vertically directive transmitting antennas.

(b) In no event shall a station authorized under this subpart be operated with a power output in excess of the transmitter type-accepted rating.

§ 74.1236 Emission and bandwidth.

(a) The license of a station authorized under this subpart authorizes the transmission of either F3 or F9 emission (frequency modulation).

(b) Standard width FM channels will be assigned and the transmitting apparatus shall be operated so as to limit spurious emissions to the lowest practicable value. Any emissions including intermodulation products and radiofrequency harmonics which are not essential for the transmission of the desired aural information shall be considered to be spurious emissions.

(c) The power of emissions appearing outside the assigned channel shall be attenuated below the total power of the emission as follows:

Distance of emission from center frequency:	*Minimum attenuation below unmodulated carrier*
120 to 240 kHz	25 dB
over 240 and up to 600 kHz	35 dB
over 600 kHz	60 dB

(d) Greater attenuation than that specified in paragraph (c) of this section may be required if interference results outside the assigned channel.

§ 74.1237 Antenna location.

(a) An applicant for a new station to be authorized under this subpart or for a change in the facilities of such a station shall endeavor to select a site which will provide a line-of-sight transmission path to the entire area intended to be served and at which there is available a suitable signal from the primary station. The transmitting antenna should be placed above growing vegetation and trees lying in the direction of the area intended to be served, to minimize the possibility of signal absorption by foliage.

(b) Consideration should be given to accessibility of the site at all seasons of the year and to the availability of facilities for the maintenance and operation of the FM translator.

(c) Consideration should be given to the existence of strong radiofrequency fields from other transmitters at the translator site and the possibility that such fields may result in the retransmission of signals originating on frequencies other than that of the primary station.

(d) The transmitting antenna of an FM broadcast booster station shall be located within the predicted 1 mv/m field strength contour of its primary station, subject to note, § 74.1231(h).

EQUIPMENT

§ 74.1250 Equipment and installation.

(a) Applications for new stations authorized under this subpart or for changes in the facilities of existing stations will not be accepted for filing unless the transmitting apparatus to be employed is type accepted.

(b) Transmitting antennas, antennas used to receive signals to be rebroadcast, and transmission lines are not subject to the requirement for type acceptance.

(c) The following requirements must be met before translator or booster equipment will be type accepted by the Commission:

(1) The frequency converter and associated amplifiers of an FM translator shall be so designed that the electrical characteristics of a standard FM signal, including stereophonic subchannel, introduced into the input terminals will not be significantly altered by passage through the apparatus except as to frequency and amplitude. The overall frequency response of the apparatus within its assigned channel when operating at its rated power output and measured at the output terminals, shall provide a smooth curve, varying within limits separated by no more than 3 decibels.

(2) Radiofrequency harmonics of the output carrier frequency measured at the output terminals of the transmitter, shall be attenuated at least 60 decibels below the fundamental output carrier level. All other emissions appearing outside the assigned channel shall conform with the specifications set forth in § 74.1236(c).

(3) The local oscillator or oscillators employed in the translator equipment shall, when subjected to variations in ambient temperature between minus 30° and plus 50° centigrade and in primary supply voltage between 85 percent and 115 percent of the rated value, be sufficiently stable to maintain the output carrier frequency of the translator within plus or minus 0.005 percent of its assigned frequency, assuming zero variation of the received primary station signal from its assigned frequency.

(4) The apparatus shall contain automatic circuits which will maintain the power output constant within 2 decibels when the level of the signal at the input terminals is varied over a range of 40 decibels and which will not permit power output to exceed the maximum rated power output under any condition. If a manual adjustment is provided to compensate for different average signal levels, provision shall be made for determining the proper setting for the control and if improper adjustment of the control could result in improper operations, a label shall be affixed at the adjustment control bearing a suitable warning.

(5) The apparatus shall be equipped with automatic controls which will place it in a nonradiating condition when no signal is being received on the input channel, either due to absence of a transmitter signal or failure of the receiving portion of the translator or booster. The automatic control may include a time delay feature to prevent interruptions in the operation of the station caused by fading or other momentary failures of the incoming signal.

(6) The amplifying devices employed in the final radiofrequency amplifier shall be of the appropriate power rating to provide the rated power output of the translator or booster. The normal operating constants for operation at the rated power output shall be specified. The apparatus shall be equipped with suitable meters or meter jacks so that appropriate voltage and current measurements may be made while the apparatus is in operation.

(7) Transmitters of FM broadcast translator stations of more than 1 watt transmitter output power shall be equipped with an automatic keying device which will transmit the call sign assigned to the station, in International Morse Code, at least once each 30 minutes during the time the station is in operation unless there is in effect a firm arrangement with the station's primary station as provided in § 74.1283(c)(1). Transmission of the call sign can be accomplished in either of the following ways:

(i) By frequency shift keying; the carrier shift shall not be less than 5 kilohertz nor greater than 25 kilohertz;

(ii) By amplitude modulation of the FM carrier of at least 30 percent modulation, the audio frequency tone used shall not be within 200 hertz of the

1,000 hertz tone used for Emergency Broadcast System Alerting.

NOTE: The National Industry Advisory Committee (NIAC) has under study for the Commission an alerting system using the frequencies 853 and 960 hertz. Pending resolution of this study, audio frequency tones for identification purposes within 200 hertz of those frequencies shall not be used.

(8) Wiring, shielding, and construction shall be in accordance with accepted principles of good engineering practice.

(d) The exciter employed to provide a locally generated and modulated input signal to the translator pursuant to § 74.1231(f) shall be type accepted and shall meet the following specifications for type acceptance by the Commission:

(1) The local oscillator or oscillators employed in the exciter, when subjected to variations in ambient temperature between minus 30° and plus 50° centigrade, and in primary supply voltage between 85 percent and 115 percent of the rated value, shall be sufficiently stable to maintain the output center frequency of the exciter within plus or minus 0.005 percent of the frequency assigned to the primary station.

(2) Automatic means shall be provided for limiting the level of the audio frequency voltage applied to the modulator to insure that a frequency swing in excess of 75 kHz will not occur under any condition of modulation.

(3) Wiring, shielding, and construction shall be in accordance with accepted principles of good engineering practice.

(e) Type acceptance will be granted only upon a satisfactory showing that the apparatus is capable of meeting the requirements of paragraphs (c) and (d) of this section. The following procedures shall apply:

(1) Any manufacturer of apparatus intended for use by a station authorized under this subpart may request type acceptance by following the procedures set forth in Part 2, Subpart F, of this chapter. Equipment found to be acceptable by the Commission will be listed in the "Radio Equipment List" published by the Commission. These lists are available for inspection at any Field Office of the Commission and at the Washington, D.C., offices of the Commission.

(2) Apparatus for use by stations authorized under this subpart which has been type accepted by the Commission will normally be authorized without additional measurements by the applicant.

(3) Other rules concerning type acceptance, including information regarding withdrawal of type acceptance, modification of type accepted equipment and limitations on the findings upon which type acceptance is based, are set forth in Part 2, Subpart F, of this chapter.

(f) The installation of an FM translator or booster station employing type accepted apparatus may be made by a person with sufficient technical knowledge and skill to correctly follow the manufacturer's instructions.

(g) Simple repairs such as the replacement of tubes, fuses, or other plug-in components and the adjustment of noncritical circuits which require no particular technical skill may be made by an unskilled person. Repairs which require the replacement of attached components, adjustment of critical circuits, or technical measurements, shall be made only by a person with the knowledge and skill to perform such tasks.

(h) Any tests or adjustments which require the radiation of signals for their completion and which could result in improper operation of the apparatus, shall be made by or under the immediate supervision of a licensed first or second class radiotelephone operator.

(i) The transmitting antenna may be designed to produce either horizontal or vertical polarization.

§ 74.1251 Equipment changes.

(a) No change, either mechanical or electrical, except as provided in § 2.584 of this chapter, may be made in FM translator or booster apparatus which has been type accepted by the Commission without prior authority of the Commission.

(b) Formal application is required for any of the following changes to be made on FCC Form 346 in the case of FM broadcast translator stations and on FCC Form 349P in the case of FM broadcast booster stations:

(1) Replacement of the translator or booster as a whole except in those cases where the replacement is an identical translator or booster or is a translator or booster of identical power rating and is listed in the Commission's "Radio Equipment List." The Commission's office in Washington, D.C., and the Engineer in Charge of the radio district in which the translator or booster is located shall be promptly notified of translator or booster replacement made

without formal authorization pursuant to the exceptions of this paragraph, giving the manufacturer's name and type number of the new translator or booster, together with a statement certifying that the new installation is operating in accordance with the Commission's rules and the terms of the license or construction permit.

(2) A change in the transmitting antenna system, including the direction of radiation or directive antenna pattern.

(3) Any change in the overall height of the antenna structure except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of this chapter.

(4) Any change in the location of the translator or booster except a move within the same building or upon the same pole or tower.

(5) Any horizontal change in the location of the antenna structure which would (i) be in excess of 500 feet or (ii) would require notice to the Federal Aviation Administration pursuant to § 17.7 of this chapter.

(6) Any change of input or output frequency of a translator.

(7) Any change of primary station of a translator.

(8) Any change of authorized transmitter operating power output.

(9) Any change in authorized principal community or area being served.

(c) Other equipment changes not specifically referred to above may be made at the discretion of the licensee: *Provided,* That the Engineer in Charge of the radio district in which the translator or booster is located and the Commission's Washington, D.C., office are notified in writing upon completion of such changes: *And provided further,* That the changes are appropriately reflected in the next application for renewal of license of the FM translator or booster station.

TECHNICAL OPERATION AND OPERATORS

§ 74.1261 Frequency tolerance.

The licensee of an FM translator station shall maintain the center frequency at the output of the translator within 0.01 percent of its assigned frequency. The output frequency of an FM booster station shall be the exact frequency of its primary station.

§ 74.1262 Frequency monitors and measurements.

(a) The licensee of a station authorized under this subpart is not required to provide means for measuring the operating frequency of the transmitter. However, only equipment having the required stability will be approved for use by an FM translator or booster.

(b) In the event that a station authorized under this subpart is found to be operating beyond the frequency tolerance prescribed in § 74.1261, the licensee shall promptly suspend operation of the station and shall not resume operation until the station has been restored to its assigned frequency. Adjustment of the frequency determining circuits of an FM translator or booster shall be made by a qualified person in accordance with § 74.1250(g).

§ 74.1263 Time of operation.

(a) An FM translator is not required to adhere to any regular schedule of operation. However, the licensee of an FM translator is expected to provide a dependable service to the extent that such is within its control and to avoid unwarranted interruptions to the service provided.

(b) If an FM translator station is inoperative for 10 days or more, the licensee shall notify the Engineer in Charge of the radio district in which the station is located promptly, in writing, describing the cause of the inoperation and the steps being taken to place the translator in operation again and shall notify the Engineer in Charge promptly when operation is resumed.

(c) Failure of an FM translator to operate for a period of 30 days or more, except for causes beyond the control of the licensee, shall be deemed evidence of discontinuance of operation and the license of the translator will be canceled.

(d) An FM translator shall not be permitted to radiate during extended periods when signals of the primary station are not being retransmitted.

§ 74.1264 Station inspection.

The licensee of a station authorized under this subpart shall make the station and the records required to be kept by the rules in this subpart available for inspection by representatives of the Commission.

§ 74.1265 Posting of station license.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the station or the manner of operation shall be kept in the station record file maintained by the licensee so as to be available for inspection upon request to any authorized representative of the Commission.

(b) The call sign of the station, together with the name, address, and telephone number of the licensee or local representative of the licensee if the licensee does not reside in the community served by the station, shall be displayed at the transmitter site on the structure supporting the transmitting antenna, so as to be visible to a person standing on the ground at the transmitter site. The display shall be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition by the licensee.

§ 74.1266 Operator requirements.

(a) An operator holding a valid restricted radiotelephone operator permit shall observe the operation of a station authorized under this subpart by obtaining reception of its transmissions as frequently as may be necessary to assure proper operation, but in any event within 1 hour of the time the primary station commences operation or at 8 a.m., whichever is later, and thereafter at intervals of not more than 6 hours. Except as necessary in case of malfunction of the station, such observations need not be made between 10 p.m. and 8 a.m. the following day.

(b) In the event of malfunction, or upon notice by the Commission, the operator shall immediately cause the operation of the station to cease until the malfunction is corrected or until the conditions requiring suspension of operation are corrected.

§ 74.1267 Marking and lighting of antenna structures.

The marking and lighting of antenna structures employed by stations licensed under this subpart, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter sets forth the conditions under which marking and lighting will be required and the responsibility of the licensee with regard thereto.

§ 74.1268 Additional orders.

In cases where the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

§ 74.1269 Copies of rules.

The licensee or permittee of a station authorized under this subpart shall have a current copy of Volumes I and III of the Commission's rules and shall make the same available for use by the operator in charge. Each such licensee or permittee shall be familiar with those rules relating to stations authorized under this subpart. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

OTHER OPERATING REQUIREMENTS

§ 74.1281 Station records.

(a) The licensee of a station authorized under this subpart shall maintain adequate station records, including the current instrument of authorization, official correspondence with the Commission, maintenance records, contracts, permissions for rebroadcast, and other pertinent documents.

(b) The records to be maintained where an antenna structure is required to be marked or lighted shall be governed by the provisions of § 17.49 of this chapter.

(c) The station records shall be made available upon request to any authorized representatives of the Commission.

(d) Station records shall be retained for a period of 2 years.

§ 74.1283 Station identification.

(a) Every station authorized under this subpart with transmitter output power of more than 1 watt shall be identified in accordance with the provisions of this section. Stations with transmitter output power of 1 watt or less need not be identified.

(b) FM broadcast booster stations shall be identified by their primary stations by the broadcasting by the primary station of the primary station's call letters and location, in accordance with the provisions of § 73.287 of this chapter.

(c) FM broadcast translator stations with transmitter output power of more than 1 watt shall be identified by one of the methods prescribed herein:

(1) The licensee or permittee of such station may make arrangements with the licensee of its primary station for the broadcast by the primary station of the call letters and location of the translator station. Identification in this manner is

to be accomplished three times each day: Once between the hours of 7 and 9 a.m., unless the primary station's broadcast day begins after 9 a.m., in which case identification will be made at the beginning of its broadcast day and at the other times specified herein; once between 12:55 p.m. and 1:05 p.m.; and once between the hours of 4 and 6 p.m. Arrangements will be made so that the licensee of the primary station will keep on record, and make available to any responsible person the call letters and location of each translator station rebroadcasting its signals, with the name, address, and telephone number of the licensee or the person designated to be contacted in case of malfunction of the translator. It shall be the responsibility of the translator licensee to furnish current information in this respect to the primary station.

(2) Where the licensee or permittee of an FM translator station has not made arrangements for station identification in accordance with subparagraph (1) of this paragraph, such FM translator station shall transmit its call sign in International Morse Code at least once each 30 minutes during the time the station is in operation. The transmission may be accomplished by means of an automatic device as required by § 74.1250(c)(7). Call sign transmission shall be made at a code speed not in excess of 20 words per minute. At this speed, the transmission of each individual call sign will require approximately 4 seconds.

(d) The Commission may, in its discretion, specify other methods of identification.

(e) The call sign of an FM broadcast translator station will consist of the initial letter K or W followed by the channel number assigned to the translator and two letters. The use of the initial letter will generally conform to the pattern used in the broadcast service. The two letter combinations following the channel number will be assigned in order and requests for the assignment of particular combinations of letters will not be considered.

§ 74.1284 Rebroadcasts.

(a) The term "rebroadcast" means the reception by radio of the programs or other signals of a radio station and the simultaneous retransmission of such programs or signals for direct reception by the general public.

(b) The licensee of an FM translator shall not rebroadcast the programs of any FM broadcast station or other FM translator without obtaining prior consent of the primary station whose programs are proposed to be retransmitted. The Commission shall be notified of the call letters of each station rebroadcast and the licensee of the FM translator shall certify that written consent has been received from the licensee of the station whose programs are retransmitted.

(c) An FM translator is not authorized to rebroadcast the transmissions of any class of station other than an FM broadcast station or another FM translator.

PART 76—CABLE TELEVISION SERVICE

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APPENDIX B—Significantly viewed television stations.

AUTHORITY: The provisions of this Part 76 issued under secs. 2, 3, 4, 301, 303, 307, 308, 309, 48 Stat., as amended, 1064, 1065, 1066, 1081, 1082, 1083, 1084, 1085; 47 U.S.C. 152, 153, 154, 301, 303, 307, 308, 309.

SOURCE: The provisions of this Part 76 appear at 37 F.R. 3278, Feb. 12, 1972, unless otherwise noted.

Subpart A—General

§ 76.1 Purpose.

The rules and regulations set forth in this part provide for the certification of cable television systems and for their operation in conformity with standards for carriage of television broadcast signals, program exclusivity, cablecasting, access channels, and related matters.

§ 76.3 Other pertinent rules.

Other pertinent provisions of the Commission's rules and regulations relating to the Cable Television Service are included in the following parts of this chapter:

Part 0 —Commission Organization.
Part 1 —Practice and Procedure.
Part 21—Domestic Public Radio Services (Other Than Maritime Mobile).
Part 63—Extension of Lines and Discontinuance of Service by Carriers.
Part 64—Miscellaneous Rules Relating to Common Carriers.
Part 78—Cable Television Relay Service.
Part 91—Industrial Radio Services.

[37 F.R. 13864, June 14, 1972]

§ 76.5 Definitions.

(a) *Cable television system (or CATV system)*. Any facility that, in whole or in part, receives directly, or indirectly over the air, and amplifies or otherwise modifies the signals transmitting programs broadcast by one or more television or radio stations and distributes such signals by wire or cable to subscribing members of the public who pay for such service, but such term shall not include (1) any such facility that serves fewer than 50 subscribers, or (2) any such facility that serves only the residents of one or more apartment dwellings under common ownership, control, or management, and commercial establishments located on the premises of such an apartment house.

NOTE: In general, each separate and distinct community or municipal entity (including unincorporated communities within unincorporated areas and single, discrete unincorporated areas) served by cable television facilities constitutes a separate cable television system, even if there is a single headend and identical ownership of facilities extending into several communities. See, e.g., Telerama, Inc., 3 FCC 2d 585 (1966); Mission Cable TV, Inc., 4 FCC 2d 236 (1966).

(b) *Television station; television broadcast station*. Any television broadcast station operating on a channel regularly assigned to its community by

§ 73.606 of this chapter, and any television broadcast station licensed by a foreign government: *Provided, however,* That a television broadcast station licensed by a foreign government shall not be entitled to assert a claim to carriage or program exclusivity, pursuant to Subpart D or F of this part, but may otherwise be carried if consistent with the rules.

(c) *Television translator station.* A television broadcast translator station as defined in § 74.701 of this chapter.

(d) *Principal community contour.* The signal contour that a television station is required to place over its entire principal community by § 73.685(a) of this chapter.

(e) *Grade A and Grade B contours.* The field intensity contours defined in § 73.683(a) of this chapter.

(f) *Specified zone of a television broadcast station.* The area extending 35 air miles from the reference point in the community to which that station is licensed or authorized by the Commission. A list of reference points is contained in § 76.53. A television broadcast station that is authorized but not operating has a specified zone that terminates eighteen (18) months after the initial grant of its construction permit.

(g) *Major television market.* The specified zone of a commercial television station licensed to a community listed in § 76.51, or a combination of such specified zones where more than one community is listed.

(h) *Designated community in a major television market.* A community listed in § 76.51.

(i) *Smaller television market.* The specified zone of a commercial television station licensed to a community that is not listed in § 76.51.

(j) *Substantially duplicated.* Regularly duplicated by the network programing of one or more stations in a week during the hours of 6 to 11 p.m., local time, for a total of 14 or more hours.

(k) *Significantly viewed.* Viewed in other than cable television households as follows: (1) For a full or partial network station—a share of viewing hours of at least 3 percent (total week hours), and a net weekly circulation of at least 25 percent; and (2) for an independent station—a share of viewing hours of at least 2 percent (total week hours), and a net weekly circulation of at least 5 percent. See § 76.54.

NOTE: As used in this paragraph, "share of viewing hours" means the total hours that noncable television households viewed the subject station during the week, expressed as a percentage of the total hours these households viewed all stations during the period, and "net weekly circulation" means the number of noncable television households that viewed the station for 5 minutes or more during the entire week, expressed as a percentage of the total noncable television households in the survey area.

(l) *Full network station.* A commercial television broadcast station that generally carries in weekly prime time hours 85 percent of the hours of programing offered by one of the three major national television networks with which it has a primary affiliation (i.e., right of first refusal or first call).

(m) *Partial network station.* A commercial television broadcast station that generally carries in prime time more than 10 hours of programing per week offered by the three major national television networks, but less than the amount specified in paragraph (l) of this section.

(n) *Independent station.* A commercial television broadcast station that generally carries in prime time not more than 10 hours of programing per week offered by the three major national television networks.

(o) *Network programing.* The programing supplied by a national or regional television network, commercial or noncommercial.

(p) *Syndicated program.* Any program sold, licensed, distributed, or offered to television station licensees in more than one market within the United States for noninterconnected (i.e., nonnetwork) television broadcast exhibition, but not including live presentations.

(q) *Series.* A group of two or more works which are centered around, and dominated by the same individual, or which have the same, or substantially the same, cast of principal characters or a continuous theme or plot.

(r) *Off-network series.* A series whose episodes have had a national network television exhibition in the United States or a regional network exhibition in the relevant market.

(s) *First-run series.* A series whose episodes have had no national network television exhibition in the United States and no regional network exhibition in the relevant market.

(t) *First-run nonseries programs.* Programs, other than series, that have had no national network television exhibition in the United States and no regional network exhibition in the relevant market.

(u) *Prime time.* The 5-hour period from 6 to 11 p.m., local time, except that in the central time zone the relevant period shall be between the hours of 5 and 10 p.m., and in the mountain time zone each station shall elect whether the period shall be 6 to 11 p.m. or 5 to 10 p.m.

NOTE: Unless the Commission is notified to the contrary, a station in the mountain time zone shall be presumed to have elected the 6 to 11 p.m. period.

(v) *Cablecasting.* Programing (exclusive of broadcast signals) carried on a cable television system. See paragraphs (aa), (bb), and (cc) (Classes II, III, and IV cable television channels) of this section.

(w) *Origination cablecasting.* Programing (exclusive of broadcast signals) carried on a cable television system over one or more channels and subject to the exclusive control of the cable operator.

(x) *Access cablecasting.* Services provided by a cable television system on its public, educational, local government, or leased channels.

(y) *Legally qualified candidate.* Any person who has publicly announced that he is a candidate for nomination by a convention of a political party or for nomination or election in a primary, special, or general election, municipal, county, State, or national, and who meets the qualifications prescribed by the applicable laws to hold the office for which he is a candidate, so that he may be voted for by the electorate directly or by means of delegates or electors, and who:

(1) Has qualified for a place on the ballot, or

(2) Is eligible under the applicable law to be voted for by sticker, by writing his name on the ballot, or other method, and (i) has been duly nominated by a political party which is commonly known and regarded as such, or (ii) makes a substantial showing that he is a bona fide candidate for nomination or office.

(z) *Class I cable television channel.* A signaling path provided by a cable television system to relay to subscriber terminals television broadcast programs that are received off-the-air or are obtained by microwave or by direct connection to a television broadcast station.

(aa) *Class II cable television channel.* A signaling path provided by a cable television system to deliver to subscriber terminals television signals that are intended for reception by a television broadcast receiver without the use of an auxilliary decoding device and which signals are not involved in a broadcast transmission path.

(bb) *Class III cable television channel.* A signaling path provided by a cable television system to deliver to subscriber terminals signals that are intended for reception by equipment other than a television broadcast receiver or by a television broadcast receiver only when used with auxiliary decoding equipment.

(cc) *Class IV cable television channel.* A signaling path provided by a cable television system to transmit signals of any type from a subscriber terminal to another point in the cable television system.

(dd) *Channel frequency response.* The relationship within a cable television channel between amplitude and frequency of a constant amplitude input signal as measured as a subscriber terminal.

(ee) *Subscriber terminal.* The cable television system terminal to which a subscriber's equipment is connected. Separate terminals may be provided for delivery of signals of various classes.

(ff) *System noise.* That combination of undesired and fluctuating disturbances within a cable television channel that degrades the transmission of the desired signal and that is due to modulation processes or thermal or other noise-producing effects, but does not include hum and other undesired signals of discrete frequency. System noise is specified in terms of its rms voltage or its mean power level as measured in the 4 MHz bandwidth between 1.25 and 5.25 MHz above the lower channel boundary of a cable television channel.

(gg) *Terminal isolation.* The attenuation, at any subscriber terminal, between that terminal and any other subscriber terminal in the cable television system.

(hh) *Visual signal level.* The rms voltage produced by the visual signal during the transmission of synchronizing pulses.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13864, July 14, 1972]

§ 76.7 Special relief.

(a) On petition by a cable television system, a franchising authority, an applicant, permittee, or licensee of a television broadcast, translator, or microwave relay station, or by any other interested person, the Commission may waive any provision of the rules relating to cable television systems, impose additional or different requirements, or issue a ruling on a complaint or disputed question.

(b) The petition may be submitted informally, by letter, but shall be accompanied by an affidavit of service on any cable television system, franchising authority, station licensee, permittee, or applicant, or other interested person who may be directly affected if the relief requested in the petition should be granted.

(c) (1) The petition shall state the relief requested and may contain alternative requests. It shall state fully and precisely all pertinent facts and considerations relied on to demonstrate the need for the relief requested and to support a determination that a grant of such relief would serve the public interest. Factual allegations shall be supported by affidavit of a person or persons with actual knowledge of the facts, and exhibits shall be verified by the person who prepares them.

(2) A petition for a ruling on a complaint or disputed question shall set forth all steps taken by the parties to resolve the problem, except where the only relief sought is a clarification or interpretation of the rules.

(3) If a petition involves more than one cable television community, three (3) copies of it should be filed for each such community, in addition to the number of copies otherwise required to be filed pursuant to § 1.51 of this chapter.

(d) Interested persons may submit comments or opposition to the petition within thirty (30) days after it has been filed. For good cause shown in the petition, the Commission may, by letter or telegram to known interested persons, specify a shorter time for such submissions. Comments or oppositions shall be served on petitioner and on all persons listed in petitioner's affidavit of service, and shall contain a detailed full showing, supported by affidavit, of any facts or considerations relied on.

(e) The petitioner may file a reply to the comments or oppositions within twenty (20) days after their submission, which shall be served on all persons who have filed pleadings and shall also contain a detailed full showing, supported by affidavit, of any additional facts or considerations relied on. For good cause shown, the Commission may specify a shorter time for the filing of reply comments.

(f) The Commission, after consideration of the pleadings, may determine whether the public interest would be served by the grant, in whole or in part, or denial of the request, or may issue a ruling on the complaint or dispute. The Commission may specify other procedures, such as oral argument, evidentiary hearing, or further written submissions directed to particular aspects, as it deems appropriate. In the event that an evidentiary hearing is required, the Commission will determine, on the basis of the pleadings and such other procedures as it may specify, whether temporary relief should be afforded any party pending the hearing and the nature of any such temporary relief.

(g) Where a petition for waiver of the provisions of §§ 76.57(a), 76.59(a), 76.61(a), or 76.63(a), is filed within fifteen (15) days after a request for carriage, a cable television system need not carry the signal of the requesting station pending the Commission's ruling on the petition or on the question of temporary relief pending further proceedings.

(h) On a finding that the public interest so requires, the Commission may determine that a cable television system operating or proposing to operate in a community located outside of the 48 contiguous states shall comply with provisions of Subparts D, F, and G of this part in addition to the provisions thereof otherwise applicable. In such instances, any additional signal carriage that is authorized shall be deemed to be pursuant to the appropriate provision of §§ 76.61(b) or 76.63(a) (as it relates to § 76.61(b)).

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13864, July 14, 1972]

Subpart B—Applications and Certificates of Compliance

§ 76.11 Certificate of compliance required.

(a) No cable television system shall commence operations or add a television broadcast signal to existing operations unless it receives a certificate of compliance from the Commission.

(b) No cable television system lawfully carrying television broadcast signals in a community prior to March 31, 1972, shall continue carriage of such signals beyond the end of its current franchise period, or March 31, 1977, whichever occurs first, unless it receives a certificate of compliance.

(c) A cable television system to which paragraph (b) of this section applies may continue to carry television broadcast signals after expiration of the period specified therein, if an application for certificate is filed at least thirty (30) days prior to the date on which a certificate would otherwise be required and the Commission has not acted on the application.

(d) A certificate of compliance that is granted pursuant to this section shall be valid until the unamended expiration date of the franchise under which the certificated cable television system is operating or will operate, unless the Commission otherwise orders. A cable system may continue to carry television broadcast signals after the expiration of its certificate, if an application for a new certificate is filed at least thirty (30) days prior to the expiration date of the existing certificate and the Commission has not acted on the application.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13865, July 14, 1972]

§ 76.13 Filing of applications.

No standard form is prescribed in connection with the filing of an application for a certificate of compliance; however, three (3) copies of the following information must be provided:

(a) For a cable television system not operational prior to March 31, 1972 (other than systems that were authorized to carry one or more television signals prior to March 31, 1972, but did not commence such carriage prior to that date), an application for certificate of compliance shall include:

(1) The name and mailing address of the operator of the proposed system, community and area to be served, television signals to be carried (other than those permitted to be carried pursuant to § 76.61(b)(2)(ii) or § 76.63(a) (as it related to § 76.61(b)(2)(ii)), proposed date on which cable operations will commence, and, if applicable, a statement that microwave radio facilities are to be used to relay one or more signals;

(2) A copy of FCC Form 325, "Annual Report of Cable Television Systems," supplying the information requested as though the cable system were already in operation as proposed;

(3) A copy of the franchise, license, permit, or certificate granted to construct and operate a cable television system;

(4) A statement that explains how the proposed system's franchise and its plans for availability and administration of access channels and other nonbroadcast cable services are consistent with the provisions of §§ 76.31, 76.201, and 76.251;

NOTE: If the proposed system's franchise was issued prior to March 31, 1972, only substantial consistency with the provisions of § 76.31 need be demonstrated in the statement required in subparagraph (4), until the end of the current franchise period, or March 31, 1977, whichever occurs first.

(5) A statement that explains, in terms of the provisions of Subpart D of this part, how carriage of the proposed television signals is consistent with those provisions, including any special showings as to whether a signal is significantly viewed (see § 76.54(b));

(6) An affidavit of service of the information described in subparagraph (1) of this paragraph on the licensee or permittee of any television broadcast station within whose predicted Grade B contour or specified zone the community of the system is located, in whole or in part, the licensee or permittee of any 100-watt or higher power television translator station licensed to the community of the system, the superintendent of schools in the community of the system, and any local or state educational television authorities;

(7) A statement that a copy of the complete application has been served on the franchising authority, and that if such application is not made available for public inspection by the franchising authority, the applicant will provide for public inspection of the application at any accessible place (such as a public library, public registry for documents, or an attorney's office) in the community of the system at any time during regular business hours;

(8) A statement of the proposed system's equal employment opportunity program, as described in § 76.311. However, if the operator of the proposed system believes that the system will (continuously during January, February, and March of the year following commencement of operations) satisfy the conditions in § 76.311(c)(1)(i)(*b*), he may submit a statement justifying that conclusion in lieu of a statement of the proposed system's equal employment opportunity program.

(9) A statement that the filing fee prescribed in § 1.1116 of this chapter is attached.

(b) For a cable television system that proposes to add a television signal to existing operations, or that was authorized to carry one or more television signals prior to March 31, 1972, but did not commence such carriage prior to that date, an application for certificate of compliance shall include:

(1) The name and mailing address of the system, community and area served or to be served, television signals already being carried, television signals authorized to be carried but not carried prior to March 31, 1972, television signals not previously authorized and now proposed to be carried (other than those permitted to be carried pursuant to § 76.61(b)(2)(ii) or § 76.63(a) (as it relates to § 76.61(b)(2)(ii)), and, if applicable, a statement that microwave relay facilities are to be used to relay one or more signals;

(2) If the system has not commenced operations but has been authorized to carry one or more television signals, a copy of FCC Form 325, "Annual Report of Cable Television Systems," supplying the information requested as though the cable system were already in operation as proposed;

(3) If the system has not commenced operations but has been authorized to carry one or more television signals, a copy of the franchise, license, permit, or certificate granted to construct and operate a cable television system, and a statement that explains how the system's franchise is substantially consistent with the provisions of § 76.31;

Note: If only substantial consistency with the provisions of § 76.31 is demonstrated in the statement required in subparagraph (3), a certificate of compliance that is granted pursuant to § 76.11 shall be valid only until the end of the system's current franchise period, or March 31, 1977, whichever occurs first.

(4) A statement that explains how the system's plans for availability and administration of access channels and other nonbroadcast cable services are consistent with the provisions of §§ 76.201 and 76.251;

(5) A statement that explains, in terms of the provisions of Subpart D of this part, how carriage of the television signals not previously authorized is consistent with those provisions, including any special showings as to whether a signal is significantly viewed (see § 76.54(b));

(6) An affidavit of service of the information described in subparagraph (1) of this paragraph on the parties named in paragraph (a)(6) of this section;

(7) A statement that a copy of the complete application has been served on the franchising authority, and that if such application is not made available for public inspection by the franchising authority, the applicant will provide for public inspection of the application at any accessible place (such as a public library, public registry for documents, or an attorney's office) in the community of the system at any time during regular business hours;

(8) A statement that the filing fee prescribed in § 1.1116 of this chapter is attached.

(c) For a cable television system seeking certification of existing operations in accordance with § 76.11(b), an application for certificate of compliance shall include:

(1) The name and mailing address of the system, community and area served, television signals being carried (other than those permitted to be carried pursuant to § 76.61 (b)(2)(ii) or § 76.63(a) (as it relates to § 76.61(b)(2)(ii)), television signals authorized or certified to be carried but not being carried, date on which operations commenced, and date on which its current franchise expires;

(2) A copy of the franchise, license, permit, or certificate under which the system will operate upon Commission certification (if such franchise has not previously been filed), and a statement that explains how the franchise is consistent with the provisions of § 76.31;

(3) A statement that explains how the system's plans for availability and administration of access channels and other nonbroadcast cable services are consistent with the provisions of §§ 76.201 and 76.251;

(4) An affidavit of service of the information described in subparagraph (1) of this paragraph on the parties named in paragraph (a)(6) of this section;

(5) A statement that a copy of the complete application has been served on the franchising authority, and that if such application is not made available for public inspection by the franchising authority, the applicant will provide for public inspection of the application at any accessible place (such as a public library, public registry for documents,

or an attorney's office) in the community of the system at any time during regular business hours;

(6) A statement that the filing fee prescribed in § 1.1116 of this chapter is attached.

NOTE: As used in § 76.13, the term "predicted Grade B contour" means the field intensity contour defined in § 73.683(a) of this chapter, the location of which is determined exclusively by means of the calculations prescribed in § 73.684 of this chapter.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 6590, Mar. 31, 1972; 37 F.R. 13865, July 14, 1972; 37 F.R. 13990, July 15, 1972]

EDITORIAL NOTE: See 37 F.R. 19616 for a document affecting § 76.13. The document reads in part as follows:

Sections 76.13 (a)(4), (b)(4), and (c)(3) were amended to include the requirement that a certificate applicant explain how he plans to comply with the origination cablecasting requirements of § 76.201. No showing of compliance with § 76.201 is required pending termination of the stay of the mandatory origination cablecasting requirement. In all other respects, § 76.13 (a)(4), (b)(4), and (c)(3) will be applied retroactively to March 31, 1972.

§ 76.16 Who may sign applications.

(a) Applications for certificates of compliance, amendments thereto, and related statements of fact required by the Commission shall be personally signed by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; by an officer, if the applicant is a corporation; or by a member who is an officer, if the applicant is an unincorporated association. Applications, amendments, and related statements of fact filed on behalf of Government entities shall be signed by such duly elected or appointed officials as may be competent to do so under the laws of the applicable jurisdiction.

(b) Applications, amendments thereto, and related statements of fact required by the Commission may be signed by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall in that event separately set forth the reasons why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowedge), he shall separately set forth his reasons for believing that such statements are true.

(c) Only the original of applications, amendments, or related statements of fact need be signed; copies may be conformed.

[37 F.R. 13865, July 14, 1972]

§ 76.18 Amendment of applications.

An application for a certificate of compliance may be amended as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the application, merely by filing three (3) copies of the amendment in question duly executed in accordance with § 76.16. All amendments shall be served on the franchising authority, on all parties that have filed pleadings responsive to the application, and, if the addition or deletion of a television broadcast signal is involved, on all parties served pursuant to § 76.13. Amendments shall be made available for public inspection in the same manner as the application.

[37 F.R. 13866, July 14, 1972]

§ 76.20 Dismissal of applications.

(a) An application for a certificate of compliance may, upon request of the applicant, be dismissed without prejudice as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the application. An applicant's request for the return of an application will be regarded as a request for dismissal.

(b) Failure to prosecute an application, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Such dismissal will be without prejudice if it occurs prior to the adoption date of any final action taken by the Commission with respect to the application.

[37 F.R. 13866, July 14, 1972]

§ 76.25 Public notice.

The Commission will give public notice of the filing of applications for certificates of compliance and of amendments thereto that add or delete television signals. A certificate will not be issued sooner than thirty (30) days from the date of public notice.

[37 F.R. 13866, July 14, 1972]

§ 76.27 Objections to applications; related matters.

An objection to an application for certificate of compliance or an amendment thereto shall be filed within thirty (30) days of the public notice described in § 76.25. A reply may be filed within twenty (20) days after an objection is filed. Factual allegations shall be supported by affidavit of a person or persons with actual knowledge of the facts, and exhibits shall be verified by the person who prepares them. All pleadings shall be served on the persons specified in § 76.13, the cable television system, the franchising authority, and any other interested person. Controversies concerning carriage (Subpart D) and program exclusivity (§ 76.91) will be acted on in connection with the certificating process if raised within thirty (30) days of the public notice; any other objection will be treated as a petition for special relief filed pursuant to § 76.7.

[37 F.R. 13866, July 14, 1972]

Subpart C—Federal-State/Local Regulatory Relationships

§ 76.31 Franchise standards.

(a) In order to obtain a certificate of compliance, a proposed or existing cable television system shall have a franchise or other appropriate authorization that contains recitations and provisions consistent with the following requirements:

(1) The franchisee's legal, character, financial, technical, and other qualifications, and the adequacy and feasibility of its construction arrangements, have been approved by the franchising authority as part of a full public proceeding affording due process;

(2) The franchisee shall accomplish significant construction within one (1) year after receiving Commission certification, and shall thereafter equitably and reasonably extend energized trunk cable to a substantial percentage of its franchise area each year, such percentage to be determined by the franchising authority;

(3) The initial franchise period shall not exceed fifteen (15) years, and any renewal franchise period shall be of reasonable duration;

(4) The franchising authority has specified or approved the initial rates that the franchisee charges subscribers for installation of equipment and regular subscriber services. No increases in rates charged to subscribers shall be made except as authorized by the franchising authority after an appropriate public proceeding affording due process;

(5) The franchise shall specify procedures for the investigation and resolution of all complaints regarding the quality of service, equipment malfunctions, and similar matters, and shall require that the franchisee maintain a local business office or agent for these purposes;

(6) Any modifications of the provisions of this section resulting from amendment by the Commission shall be incorporated into the franchise within one (1) year of adoption of the modification, or at the time of franchise renewal, whichever occurs first: *Provided, however,* That, in an application for certificate of compliance, consistency with these requirements shall not be expected of a cable television system that was in operation prior to March 31, 1972, until the end of its current franchise period, or March 31, 1977, whichever occurs first; *And provided, further,* That on a petition filed pursuant to § 76.7, in connection with an application for certificate of compliance, the Commission may waive consistency with these requirements for a cable system that was not in operation prior to March 31, 1972, and that, relying on an existing franchise, made a significant financial investment or entered into binding contractual agreements prior to March 31, 1972, until the end of its current franchise period, or March 31, 1977, whichever comes first.

(b) The franchise fee shall be reasonable (e.g., in the range of 3–5 percent of the franchisee's gross subscriber revenues per year from cable television operations in the community (including all forms of consideration, such as initial lump sum payments)). If the franchise fee exceeds 3 percent of such revenues, the cable television system shall not receive Commission certification until the reasonableness of the fee is approved by the Commission on showings, by the franchisee, that it will not interfere with the effectuation of Federal regulatory goals in the field of cable television, and, by the franchising authority, that it is appropriate in light of the planned local regulatory program. The provisions of this paragraph shall not be effective with respect to a cable television system that was in operation prior to March 31, 1972, until the end of its current franchise period, or March 31, 1977, whichever occurs first.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13866, July 14, 1972]

Subpart D—Carriage of Television Broadcast Signals

§ 76.51 Major television markets.

For purposes of the cable television rules, the following is a list of the major television markets and their designated communities:

(a) First 50 major television markets:

(1) New York, N.Y.—Linden-Paterson, N.J.
(2) Los Angeles-San Bernardino-Corona-Fontana, Calif.
(3) Chicago, Ill.
(4) Philadelphia, Pa.-Burlington, N.J.
(5) Detroit, Mich.
(6) Boston-Cambridge-Worcester, Mass.
(7) San Francisco-Oakland-San Jose, Calif.
(8) Cleveland-Lorain-Akron, Ohio.
(9) Washington, D.C.
(10) Pittsburgh, Pa.
(11) St. Louis, Mo.
(12) Dallas-Fort Worth, Tex.
(13) Minneapolis-St. Paul, Minn.
(14) Baltimore, Md.
(15) Houston, Tex.
(16) Indianapolis-Bloomington, Ind.
(17) Cincinnati, Ohio-Newport, Ky.
(18) Atlanta, Ga.
(19) Hartford-New Haven-New Britain-Waterbury, Conn.
(20) Seattle-Tacoma, Wash.
(21) Miami, Fla.
(22) Kansas City, Mo.
(23) Milwaukee, Wis.
(24) Buffalo, N.Y.
(25) Sacramento-Stockton-Modesto, Calif.
(26) Memphis, Tenn.
(27) Columbus, Ohio.
(28) Tampa-St. Petersburg, Fla.
(29) Portland, Oreg.
(30) Nashville, Tenn.
(31) New Orleans, La.
(32) Denver, Colo.
(33) Providence, R.I.-New Bedford, Mass.
(34) Albany-Schenectady-Troy, N.Y.
(35) Syracuse, N.Y.
(36) Charleston-Huntington, W. Va.
(37) Kalamazoo-Grand Rapids-Muskegon-Battle Creek, Mich.
(38) Louisville, Ky.
(39) Oklahoma City, Okla.
(40) Birmingham, Ala.
(41) Dayton-Kettering, Ohio.
(42) Charlotte, N.C.
(43) Phoenix-Mesa, Ariz.
(44) Norfolk-Newport News-Portsmouth-Hampton, Va.
(45) San Antonio, Tex.
(46) Greenville - Spartanburg - Anderson, S.C.-Asheville, N.C.
(47) Greensboro-High Point-Winston Salem, N.C.
(48) Salt Lake City, Utah.
(49) Wilkes Barre-Scranton, Pa.
(50) Little Rock, Ark.

(b) Second 50 major television markets:

(51) San Diego, Calif.
(52) Toledo, Ohio.
(53) Omaha, Nebr.
(54) Tulsa, Okla.
(55) Orlando-Daytona Beach, Fla.
(56) Rochester, N.Y.
(57) Harrisburg-Lancaster-York, Pa.
(58) Texarkana, Tex.-Shreveport, La.
(59) Mobile, Ala.-Pensacola, Fla.
(60) Davenport, Iowa-Rock Island-Moline, Ill.
(61) Flint-Bay City-Saginaw, Mich.
(62) Green Bay, Wis.
(63) Richmond-Petersburg, Va.
(64) Springfield - Decatur - Champaign-Jacksonville, Ill.
(65) Cedar Rapids-Waterloo, Iowa.
(66) Des Moines-Ames, Iowa.
(67) Wichita-Hutchinson, Kans.
(68) Jacksonville, Fla.
(69) Cape Girardeau, Mo.-Paducah, Ky.-Harrisburg, Ill.
(70) Roanoke-Lynchburg, Va.
(71) Knoxville, Tenn.
(72) Fresno, Calif.
(73) Raleigh-Durham, N.C.
(74) Johnstown-Altoona, Pa.
(75) Portland-Poland Spring, Maine.
(76) Spokane, Wash.
(77) Jackson, Miss.
(78) Chattanooga, Tenn.
(79) Youngstown, Ohio.
(80) South Bend-Elkhart, Ind.
(81) Albuquerque, N. Mex.
(82) Fort Wayne-Roanoke, Ind.
(83) Peoria, Ill.
(84) Greenville - Washington - New Bern, N.C.
(85) Sioux Falls-Mitchell, S. Dak.
(86) Evansville, Ind.
(87) Baton Rouge, La.
(88) Beaumont-Port Arthur, Tex.
(89) Duluth, Minn.-Superior, Minn.
(90) Wheeling, W. Va.-Steubenville, Ohio.
(91) Lincoln-Hastings-Kearney, Nebr.
(92) Lansing-Onondaga, Mich.
(93) Madison, Wis.
(94) Columbus, Ga.
(95) Amarillo, Tex.
(96) Huntsville-Decatur, Ala.
(97) Rockford-Freeport, Ill.
(98) Fargo-Valley City, N.D.
(99) Monroe, La.-El Dorado, Ark.
(100) Columbia, S.C.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13866, July 14, 1972]

§ 76.53 Reference points.

To determine the boundaries of the major and smaller television markets (defined in § 76.5), the following list of reference points for communities having licensed television broadcast stations and/or outstanding construction permits shall be used. Where a community's reference point is not given, the geographic coordinates of the main post office in the community shall be used.

State and community	Latitude			Longitude		
	°	′	″	°	′	″
Alabama:						
Anniston	33	39	49	87	49	47
Birmingham	33	31	01	86	48	36
Decatur	34	36	35	86	58	45
Demopolis	32	30	56	87	50	07
Dothan	31	13	27	85	23	35
Dozier	31	29	30	86	21	59
Florence	34	48	05	87	40	31
Huntsville	34	44	18	86	35	19
Louisville	31	47	00	85	33	09
Mobile	30	41	36	88	02	33
Montgomery	32	22	33	86	18	31
Mount Cheaha State Park	32	29	06	85	48	30
Selma	24	24	26	87	01	15
Tuscaloosa	33	12	05	87	33	44
Alaska:						
Anchorage	61	13	09	149	53	29
College	64	51	22	147	48	38
Fairbanks	64	50	35	147	41	31
Juneau	58	18	06	134	25	09
Sitka	57	02	58	135	20	12
Arizona:						
Flagstaff	35	11	54	111	39	02
Mesa	33	24	54	111	49	41
Nogales	31	20	14	110	56	12
Phoenix	33	27	12	112	04	28
Tucson	32	13	15	110	58	08
Yuma	32	43	16	114	37	01
Arkansas:						
El Dorado	33	12	39	92	39	40
Fayetteville	36	03	41	94	09	38
Fort Smith	35	23	10	94	25	36
Jonesboro	35	50	14	90	42	11
Little Rock	34	44	42	92	16	37
California:						
Bakersfield	35	22	31	119	01	16
Chico	39	44	07	121	49	57
Concord	37	58	46	122	01	51
Corona	33	52	35	117	33	56
El Centro	32	47	25	115	32	45
Eureka	40	48	08	124	09	46
Fontana	34	05	45	117	26	29
Fresno	36	44	12	119	47	11
Guasti	34	03	48	117	35	10
Hanford	36	19	51	119	38	48
Los Angeles	34	03	15	118	14	28
Modesto	37	38	26	120	59	44
Monterey	36	35	44	121	53	39
Oakland	37	48	03	122	15	54
Palm Springs	33	49	22	116	32	46
Redding	40	34	57	122	23	34
Sacramento	38	34	57	121	29	41
Salinas	36	40	24	121	39	25
San Bernardino	34	06	30	117	17	28
San Diego	32	42	53	117	09	21
San Francisco	37	46	39	122	24	40
San Jose	37	20	16	121	53	24
San Luis Obispo	35	16	49	120	39	34
San Mateo	37	34	08	122	19	16
Santa Barbara	34	25	18	119	41	55
Santa Maria	34	57	02	120	26	10
Stockton	37	57	30	121	17	16
Tulare	36	12	31	119	20	35
Ventura	34	16	47	119	17	22
Visalia	36	19	46	119	17	30
Colorado:						
Colorado Springs	38	50	07	104	49	16
Denver	39	44	58	104	59	22
Durango	37	16	29	107	52	25
Grand Junction	39	04	06	108	33	54
Montrose	38	28	44	107	52	31
Pueblo	38	16	17	104	36	33
Sterling	40	37	29	103	12	25
Connecticut:						
Bridgeport	41	10	49	73	11	22
Hartford	41	46	12	72	40	49
New Britain	41	40	02	72	47	08
Connecticut—Continued						
New Haven	41	18	25	72	55	30
Norwich	41	31	36	72	04	31
Waterbury	41	33	13	73	02	31
Delaware:						
Wilmington	39	44	46	75	32	51
District of Columbia:						
Washington	38	53	51	77	00	33
Florida:						
Clearwater	27	57	56	82	47	51
Daytona Beach	29	12	44	81	01	10
Fort Lauderdale	26	07	11	80	08	34
Fort Myers	26	38	42	81	52	06
Fort Pierce	27	26	48	80	19	38
Gainesville	29	38	56	82	19	19
Jacksonville	30	19	44	81	39	42
Largo	27	54	54	82	47	32
Leesburg	28	48	43	81	52	30
Melbourne	28	04	41	80	36	29
Miami	25	46	37	80	11	32
Ocala	29	11	34	82	08	14
Orlando	28	32	42	81	22	38
Panama City	30	09	24	85	39	46
Pensacola	30	24	51	87	12	56
St. Petersburg	27	46	18	82	38	19
Sarasota	27	20	05	82	32	20
Tallahassee	30	26	30	84	16	56
Tampa	27	56	58	82	27	25
West Palm Beach	26	42	36	80	03	07
Georgia:						
Albany	31	34	36	84	09	22
Athens	33	57	34	83	22	39
Atlanta	33	45	10	84	23	37
Augusta	33	28	20	81	58	00
Chatsworth	34	46	08	84	46	10
Cochran	32	23	18	83	21	18
Columbus	32	28	07	84	59	24
Dawson	31	46	33	84	26	20
Macon	32	50	12	83	37	36
Pelham	31	07	42	84	09	02
Savannah	32	04	42	81	05	37
Thomasville	30	50	25	83	58	59
Waycross	31	12	19	82	21	47
Wrens	33	12	21	82	23	23
Guam:						
Agana	13	28	23	144	45	00
Hawaii:						
Hilo	19	43	42	155	05	30
Honolulu	21	18	36	157	51	48
Wailuku	20	53	21	156	30	27
Idaho:						
Boise	43	37	07	116	11	58
Idaho Falls	43	29	39	112	02	28
Lewiston	46	25	05	117	01	10
Moscow	46	43	58	116	59	54
Pocatello	42	51	38	112	27	01
Twin Falls	42	33	25	114	28	21
Illinois:						
Aurora	41	45	22	88	18	56
Bloomington	40	28	58	88	59	32
Carbondale	37	43	38	89	13	00
Champaign	40	07	05	88	14	48
Chicago	41	52	28	87	38	22
Decatur	39	50	37	88	57	11
Elgin	42	02	14	88	16	53
Freeport	42	17	57	89	37	07
Harrisburg	37	44	20	88	32	25
Jacksonville	39	44	03	90	13	44
Joliet	41	31	37	88	04	52
La Salle	41	19	49	89	05	44
Moline	41	30	31	90	30	49
Mount Vernon	38	18	29	88	54	26
Olney	38	43	47	88	05	00
Peoria	40	41	42	89	35	33
Quincy	39	55	59	91	24	12
Rockford	42	16	07	89	05	48
Rock Island	41	30	40	90	34	24
Springfield	39	47	58	89	38	51
Urbana	40	06	41	88	13	13
Indiana:						
Bloomington	39	09	56	86	31	52
Elkhart	41	40	56	85	58	15
Evansville	37	58	20	87	34	21

State and community	Latitude			Longitude		
	°	′	″	°	′	″
Indiana—Continued						
Fort Wayne	41	04	21	85	08	26
Gary	41	35	59	87	20	07
Hammond	41	35	13	87	27	43
Indianapolis	39	46	07	86	09	46
Lafayette	40	25	11	86	53	39
Marion	40	33	17	85	39	49
Muncie	40	11	28	85	23	16
Richmond	39	49	49	86	53	26
Roanoke	40	57	50	85	22	30
St. John	41	27	00	87	28	13
South Bend	41	40	33	86	15	01
Terre Haute	39	28	03	87	24	26
Vincennes	38	40	52	87	31	12
Iowa:						
Ames	42	01	36	93	36	44
Cedar Rapids	41	58	48	91	39	48
Davenport	41	31	24	90	34	21
Des Moines	41	35	14	93	37	00
Dubuque	42	29	55	90	40	08
Fort Dodge	42	30	12	94	11	05
Iowa City	41	39	37	91	31	52
Mason City	43	09	15	93	12	00
Sioux City	42	29	46	96	24	30
Waterloo	42	29	40	92	20	20
Kansas:						
Ensign	37	38	48	100	14	00
Garden City	37	57	54	100	52	20
Goodland	39	20	53	101	42	35
Great Bend	38	22	04	98	45	58
Hays	38	52	16	99	19	57
Hutchinson	38	03	11	97	55	20
Pittsburg	37	24	50	94	42	11
Salina	38	50	36	97	36	46
Topeka	39	03	16	95	40	23
Wichita	37	41	30	97	20	16
Kentucky:						
Ashland	38	28	36	82	38	23
Bowling Green	36	59	41	86	26	33
Covington	39	05	00	84	30	29
Elizabethtown	38	41	38	85	51	35
Hazard	37	14	54	87	11	31
Lexington	38	02	50	84	29	46
Louisville	38	14	47	85	45	49
Madisonville	37	19	45	87	29	54
Morehead	38	10	53	83	26	08
Murray	36	36	35	88	18	39
Newport	39	05	28	84	29	20
Owensboro	37	46	27	87	06	46
Owenton	38	32	11	84	50	16
Paducah	37	05	13	88	35	56
Pikesville	37	28	49	82	31	09
Somerset	37	05	35	84	36	17
Louisiana:						
Alexandria	31	18	33	92	26	47
Baton Rouge	30	26	58	91	11	00
Houma	29	35	34	90	43	09
Lafayette	30	13	24	92	01	06
Lake Charles	30	13	45	93	12	52
Monroe	32	30	02	92	06	55
New Orleans	29	56	53	90	04	10
Shreveport	32	30	46	93	44	58
West Monroe	32	30	51	92	08	13
Maine:						
Augusta	44	18	53	69	46	29
Bangor	44	48	13	68	46	18
Calais	45	11	04	67	16	43
Orono	44	53	15	68	40	12
Poland Spring	44	01	42	70	21	40
Portland	43	39	33	70	15	19
Presque Isle	46	40	57	68	00	52
Maryland:						
Baltimore	39	17	26	76	36	45
Cumberland	39	39	01	78	45	45
Hagerstown	39	38	39	77	43	15
Salisbury	38	21	56	75	35	56
Massachusetts:						
Adams	42	37	30	73	07	05
Boston	42	21	24	71	03	25
Cambridge	42	21	58	71	06	24
Greenfield	42	35	15	72	35	54
New Bedford	41	38	13	70	55	41
Massachusetts—Continued						
Springfield	42	06	21	72	35	32
Worcester	42	15	37	71	48	17
Michigan:						
Allen Park	42	15	12	83	12	57
Battle Creek	42	18	58	85	10	48
Bay City	43	36	04	83	53	15
Cadillac	44	15	10	85	23	52
Cheboygan	45	38	38	84	28	38
Detroit	42	19	48	83	02	57
Escanaba	45	44	45	87	03	18
Flint	43	00	50	83	41	33
Grand Rapids	42	58	03	85	40	13
Jackson	42	14	43	84	24	22
Kalamazoo	42	17	29	85	35	14
Lansing	42	44	01	84	33	15
Marquette	46	32	37	87	23	43
Mount Pleasant	43	16	12	84	46	31
Muskegon	43	14	17	86	15	02
Onondaga	42	26	41	84	33	43
Saginaw	43	25	52	83	56	05
Sault Ste. Marie	46	29	58	84	20	37
Traverse City	44	45	47	85	37	25
University Center	43	33	31	83	59	09
Minnesota:						
Alexandria	45	53	06	95	22	39
Appleton	45	12	00	96	01	02
Austin	43	39	57	92	58	20
Duluth	46	46	56	92	06	24
Hibbing	47	25	43	92	56	21
Mankato	44	09	49	94	00	09
Minneapolis	44	58	57	93	15	43
Rochester	44	01	21	92	28	03
St. Cloud	45	33	35	94	09	38
St. Paul	44	56	50	93	05	11
Walker	47	05	57	94	35	12
Mississippi:						
Biloxi	30	23	43	88	53	08
Bude	31	27	46	90	50	34
Columbus	33	29	40	88	25	33
Greenwood	33	31	05	90	10	55
Gulfport	30	22	04	89	05	36
Jackson	32	17	56	90	11	06
Laurel	31	41	40	89	07	48
Meridian	32	21	57	88	42	02
Oxford	34	22	00	89	31	07
State College	33	27	18	88	47	13
Tupelo	34	15	26	88	42	30
Missouri:						
Cape Girardeau	37	18	29	89	31	29
Columbia	38	57	03	92	19	46
Hannibal	39	42	24	91	22	45
Jefferson City	38	34	40	92	10	24
Joplin	37	05	26	94	30	50
Kansas City	39	04	56	94	35	20
Kirksville	40	11	37	92	34	58
Poplar Bluff	36	45	20	90	23	38
St. Joseph	39	45	57	94	51	02
St. Louis	38	37	45	90	12	22
Sedalia	38	42	08	93	13	26
Springfield	37	13	03	93	17	32
Montana:						
Anaconda	46	07	40	112	57	12
Billings	45	47	00	108	30	04
Butte	46	01	06	112	32	11
Glendive	47	06	42	104	43	02
Great Falls	47	29	33	111	18	23
Helena	46	35	33	112	02	24
Kalispell	48	11	45	114	18	44
Miles City	46	24	34	105	50	30
Missoula	46	52	23	113	59	29
Nebraska:						
Albion	41	41	23	97	59	53
Alliance	42	06	04	102	52	08
Bassett	42	35	00	99	32	10
Grand Island	40	55	33	98	20	23
Hastings	40	35	21	98	23	20
Hayes Center	40	30	36	101	01	18
Hay Springs	42	41	03	102	41	22
Kearney	40	41	58	99	04	53
Lexington	40	46	30	99	44	41
Lincoln	40	48	59	96	42	15
McCook	40	12	02	100	37	32

State and community	Latitude			Longitude		
	°	′	″	°	′	″
Nebraska—Continued						
Merriman	42	55	07	101	42	02
Norfolk	42	01	56	97	24	42
North Platte	41	08	14	100	45	43
Omaha	41	15	42	95	56	14
Scottsbluff	41	51	40	103	39	00
Superior	40	01	12	98	04	00
Nevada:						
Elko	40	50	00	115	45	41
Henderson	36	02	00	114	58	57
Las Vegas	36	10	20	115	08	37
Reno	39	31	27	119	48	40
New Hampshire:						
Berlin	44	28	20	71	10	43
Durham	43	08	02	70	55	35
Hanover	43	42	03	72	17	24
Keene	42	56	02	72	16	44
Lebanon	43	38	34	72	15	12
Littleton	44	18	22	71	46	13
Manchester	42	59	28	71	27	41
New Jersey:						
Atlantic City	39	21	32	74	25	53
Burlington	40	04	21	74	51	47
Camden	39	56	45	75	07	20
Glen Ridge	40	48	16	74	12	14
Linden	40	37	57	74	15	22
Newark	40	44	14	74	10	19
New Brunswick	40	29	38	74	26	49
Paterson	40	54	51	74	09	51
Trenton	40	13	16	74	45	28
Vineland	39	29	13	75	01	17
Wildwood	38	59	18	74	48	43
New Mexico:						
Albuquerque	35	05	01	106	39	05
Carlsbad	32	25	09	104	13	47
Clovis	34	24	11	103	12	08
Portales	34	10	58	103	20	10
Roswell	33	23	47	104	31	26
New York:						
Albany	42	39	01	73	45	01
Binghamton	42	06	03	75	54	47
Buffalo	42	52	52	78	52	21
Carthage	43	58	50	75	36	26
Elmira	42	05	26	76	48	22
Garden City	40	43	26	73	38	03
Ithaca	42	26	33	76	29	42
Jamestown	42	05	45	79	14	40
New York	40	45	06	73	59	39
North Pole	44	23	59	73	51	00
Norwood	44	45	00	75	59	39
Oneonta	42	27	21	75	03	42
Patchogue	40	45	56	73	00	42
Plattsburgh	44	42	03	73	27	07
Riverhead	40	55	06	72	39	51
Rochester	43	09	41	77	36	21
Schenectady	42	48	52	73	56	24
Syracuse	43	03	04	76	09	14
Utica	43	06	12	75	13	33
Watertown	43	58	30	75	54	48
North Carolina:						
Asheville	35	35	42	82	33	26
Chapel Hill	35	54	51	79	03	11
Charlotte	35	13	44	80	50	45
Columbia	35	55	06	76	15	04
Concord	35	24	29	80	34	45
Durham	35	59	48	78	54	00
Fayetteville	35	03	12	78	52	54
Greensboro	36	04	17	79	47	25
Greenville	35	36	49	77	22	22
Hickory	35	43	54	81	20	20
High Point	35	57	14	80	00	15
Jacksonville	34	45	00	77	25	54
Linville	36	04	06	81	52	16
New Bern	35	06	33	77	02	23
Raleigh	35	46	38	78	38	21
Washington	35	32	35	77	03	16
Wilmington	34	14	14	77	56	58
Winston-Salem	36	05	52	80	14	42
North Dakota:						
Bismark	46	48	23	100	47	17
Devils Lake	48	06	42	98	51	29
Dickinson	46	52	55	102	47	06
Fargo	46	52	30	96	47	18
North Dakota—Continued						
Minot	48	14	09	101	17	38
Pembina	48	58	00	97	14	37
Valley City	46	55	31	98	00	04
Williston	48	08	47	103	36	59
Ohio:						
Akron	41	05	00	81	30	44
Athens	39	19	38	82	06	09
Bowling Green	41	22	37	83	39	03
Canton	40	47	50	81	22	37
Cincinnati	39	06	07	84	30	35
Cleveland	41	29	51	81	41	50
Columbus	39	57	47	83	00	17
Dayton	39	45	32	84	11	43
Kettering	39	41	22	84	10	07
Lima	40	44	29	84	06	34
Lorain	41	27	48	82	10	23
Marion	40	35	14	83	07	36
Newark	40	03	35	82	24	15
Oxford	39	30	28	84	44	26
Portsmouth	38	44	06	82	59	39
Springfield	39	55	38	83	48	29
Steubenville	40	21	42	80	36	53
Toledo	41	39	14	83	32	39
Youngstown	41	05	57	80	39	02
Zanesville	39	56	59	82	00	56
Oklahoma:						
Ada	34	46	24	96	40	36
Ardmore	34	10	18	97	07	50
Lawton	34	36	27	98	23	41
Oklahoma City	35	28	26	97	31	04
Sayre	35	17	34	99	38	23
Tulsa	36	09	12	95	59	34
Oregon:						
Coos Bay	43	22	02	124	13	09
Corvallis	44	34	10	123	16	12
Eugene	44	03	16	123	05	30
Klamath Falls	42	13	32	121	46	32
La Grande	45	19	47	118	05	45
Medford	42	19	33	122	52	31
Portland	45	31	06	122	40	35
Roseburg	43	12	34	123	20	26
Salem	44	56	21	123	01	59
Pennsylvania:						
Allentown	40	36	11	75	28	06
Altoona	40	30	55	78	24	03
Bethlehem	40	37	57	75	21	36
Clearfield	41	01	20	78	26	10
Erie	42	07	15	80	04	57
Harrisburg	40	15	43	76	52	59
Hershey	40	17	04	76	39	01
Johnstown	40	19	35	78	55	03
Lancaster	40	02	25	76	18	29
Philadelphia	39	56	58	75	09	21
Pittsburgh	40	26	19	80	00	00
Reading	40	20	09	75	55	40
Scranton	41	24	32	75	39	46
Wilkes-Barre	41	14	32	75	53	17
York	39	57	35	76	43	36
Puerto Rico:						
Aguadilla	18	25	53	67	09	18
Arecibo	18	28	26	66	43	39
Caguas	18	13	59	66	02	06
Fajardo	18	19	35	65	39	21
Mayaguez	18	12	16	67	08	36
Ponce	18	00	51	66	36	58
San Juan	18	26	55	66	03	55
Rhode Island:						
Providence	41	49	32	71	24	41
South Carolina:						
Allendale	33	00	30	81	18	26
Anderson	34	30	06	82	38	54
Charleston	32	46	35	79	55	53
Columbia	34	00	02	81	02	00
Florence	34	11	49	79	46	06
Greenville	34	50	50	82	24	01
Spartanburg	34	57	03	81	56	06
South Dakota:						
Aberdeen	45	27	31	98	29	03
Brookings	44	18	38	96	47	53
Florence	45	03	14	97	19	35
Lead	44	21	07	103	46	03
Mitchell	43	42	48	98	01	36

State and community	Latitude			Longitude		
	°	′	″	°	′	″
South Dakota—Continued						
Pierre	44	22	06	100	20	57
Rapid City	44	04	52	103	13	11
Reliance	43	52	45	99	36	18
Sioux Falls	43	32	35	96	43	35
Vermillion	42	46	52	96	55	35
Tennessee:						
Chattanooga	35	02	41	85	18	32
Jackson	35	36	48	88	49	15
Johnson City	36	19	04	82	20	56
Kingsport	36	32	57	82	33	44
Knoxville	35	57	39	83	55	07
Lexington	35	38	58	88	23	31
Memphis	35	08	46	90	03	13
Nashville	36	09	33	86	46	55
Sneedville	36	31	46	83	13	04
Texas:						
Abilene	32	27	05	99	43	51
Amarillo	35	12	27	101	50	04
Austin	30	16	09	97	44	37
Beaumont	30	05	20	94	06	09
Belton	31	03	31	97	27	39
Big Spring	32	15	03	101	28	38
Bryan	30	38	48	96	21	31
College Station	30	37	05	96	20	41
Corpus Christi	27	47	51	97	23	45
Dallas	32	47	09	96	47	37
El Paso	31	45	36	106	29	11
Fort Worth	32	44	55	97	19	44
Galveston	29	18	10	94	47	43
Harlingen	26	11	29	97	41	35
Houston	29	45	26	95	21	37
Laredo	27	30	22	99	30	30
Longview	32	28	24	94	43	45
Lubbock	33	35	05	101	50	33
Lufkin	31	20	14	94	43	21
Midland	31	59	54	102	04	31
Monahans	31	35	16	102	53	26
Nacogdoches	31	36	13	94	39	20
Odessa	31	50	49	102	22	01
Port Arthur	29	52	09	93	56	01
Richardson	32	57	06	96	44	05
Rosenberg	29	33	30	95	48	15
San Angelo	31	27	39	100	26	03
San Antonio	29	25	37	98	29	06
Sweetwater	32	28	24	100	24	18
Temple	31	06	02	97	20	22
Texarkana	33	25	29	94	02	34
Tyler	32	21	21	95	17	52
Victoria	28	48	01	97	00	06
Waco	31	33	12	97	08	00
Weslaco	26	09	24	97	59	33
Wichita Falls	33	54	34	98	29	28
Utah:						
Logan	41	44	03	111	50	11
Ogden	41	13	31	111	58	21
Provo	40	14	07	111	39	34
Salt Lake City	40	45	23	111	53	26
Vermont:						
Burlington	44	28	34	73	12	46
Rutland	43	36	29	72	58	56
St. Johnsbury	44	25	16	72	01	13
Windsor	44	28	38	72	23	32
Virginia:						
Bristol	36	35	48	82	11	04
Charlottesville	38	01	52	78	28	50
Goldvein	38	26	54	77	39	19
Hampton	37	01	32	76	20	32
Harrisonburg	38	27	01	78	52	07
Lynchburg	37	24	51	79	08	37
Norfolk	36	51	10	76	17	21
Norton	36	56	05	82	37	31
Petersburg	37	13	40	77	24	15
Portsmouth	36	50	12	76	17	54
Richmond	37	32	15	77	26	09
Roanoke	37	16	13	79	56	44
Staunton	38	09	02	79	04	34
Virgin Islands:						
Charlotte Amalie	18	20	36	64	55	53
Christiansted	17	44	44	64	42	21
Washington:						
Bellingham	48	45	02	122	28	36
Kennewick	46	12	28	119	08	32
Lakewood Center	47	07	37	122	31	15
Pasco	46	13	50	119	05	27
Pullman	46	43	42	117	10	46
Richland	46	16	36	119	16	21
Seattle	47	36	32	122	20	12
Spokane	47	39	32	117	25	33
Tacoma	47	14	59	122	26	15
Yakima	46	36	09	120	30	39
West Virginia:						
Bluefield	37	15	29	81	13	20
Charleston	38	21	01	81	37	52
Clarksburg	39	16	50	80	20	38
Grandview	37	49	28	81	04	20
Huntington	38	25	12	82	26	33
Morgantown	39	37	41	79	57	28
Oak Hill	37	58	31	81	08	45
Parkersburg	39	15	57	81	33	46
Weston	39	02	19	80	28	05
Wheeling	40	04	03	80	43	20
Wisconsin:						
Eau Claire	44	48	31	91	29	49
Fond Du Lac	43	46	35	88	26	52
Green Bay	44	30	48	88	00	50
Janesville	42	40	52	89	01	39
Kenosha	42	35	04	87	49	14
La Crosse	43	48	48	91	15	02
Madison	43	04	23	89	22	55
Milwaukee	43	02	19	87	54	15
Rhinelander	45	38	09	89	24	50
Superior	46	43	14	92	06	07
Wausau	44	57	30	89	37	40
Wyoming:						
Casper	42	51	00	106	19	22
Cheyenne	41	08	09	104	49	07
Rawlins	41	47	23	107	14	37
Riverton	43	01	29	108	23	03

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13866, July 14, 1972]

§ 76.54 Significantly viewed signals; method to be followed for special showings.

(a) Signals that are significantly viewed in a county (and thus are deemed to be significantly viewed within all communities within the county) are those that are listed in Appendix A of the memorandum opinion and order on reconsideration of the Cable Television Report and Order (Docket 18397 et al.), FCC 72-530.

(b) On or after March 31, 1973, significant viewing in a cable television community for signals not shown as significantly viewed under paragraph (a) of this section may be demonstrated by an independent professional audience survey of noncable television homes that covers at least two weekly periods separated by at least thirty (30) days but no more than one of which shall be a week between the months of April and September. If two surveys are taken, they shall include samples sufficient to assure that the combined surveys result in an average figure at least one standard error above the required viewing level. If surveys are taken for more than 2-weekly periods in any 12 months, all such surveys must be submitted and the combined surveys must result in an average figure at least one standard error above the required viewing level.

(c) Notice of a survey to be made pursuant to paragraph (b) of this section shall be served on all licensees or permittees of television broadcast stations within whose predicted Grade B contour the cable community is located, in whole or in part, and on all cable systems, franchisees, and franchise applicants in the cable community at least thirty (30) days prior to the initial survey period. Such notice shall include the name of the survey organization and a description of the procedures to be used. Objections to survey organizations or procedures shall be served on the party sponsoring the survey within twenty (20) days after receipt of such notice.

NOTE: With respect to those counties designated by an asterisk in Appendix A of the memorandum opinion and order on reconsideration of the Cable Television Report and Order (Docket 18397 et al.), FCC 72-530, surveys of significant viewing made pursuant to § 76.54(b) may be submitted prior to March 31, 1973.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13866, July 14, 1972]

§ 76.55 Manner of carriage.

(a) Where a television broadcast signal is required to be carried by a cable television system, pursuant to the rules in this subpart:

(1) The signal shall be carried without material degradation in quality (within the limitations imposed by the technical state of the art), and, where applicable, in accordance with the technical standards of Subpart K of this part;

(2) The signal shall, on request of the station licensee or permittee, be carried on the system on the channel number on which the station is transmitting, except where technically infeasible;

(3) The signal shall, on request of the station licensee or permittee, be carried on the system on no more than one channel.

(b) Where a television broadcast signal is carried by a cable television system, pursuant to the rules in this subpart, the programs broadcast shall be carried in full, without deletion or alteration of any portion except as required by this part.

(c) A cable television system need not carry the signal of any television translator station if (1) the system is carrying the signal of the originating station, or (2) the community of the system is located, in whole or in part, within the Grade B contour of a station carried on the system whose programing is substantially duplicated by the translator station.

(d) If the community of a cable television system is located, in whole or in part, within the Grade B contour of both a satellite and its parent television station, and if the system would otherwise be required to carry both of them pursuant to the rules in this subpart, the system need carry only one of these signals, and may select between them.

§ 76.57 Provisions for systems operating in communities located outside of all major and smaller television markets.

A cable television system operating in a community located wholly outside all major and smaller television markets, as defined in § 76.5, shall carry television broadcast signals in accordance with the following provisions:

(a) Any such cable television system may carry or, on request of the relevant station licensee or permittee, shall carry the signals of:

(1) Television broadcast stations within whose Grade B contours the community of the system is located, in whole or in part;

(2) Television translator stations with 100 watts or higher power serving the community of the system and, as to cable systems that commence operations or expand channel capacity after March 30, 1972, noncommercial educational translator stations with 5 watts or higher power serving the community of the system. In addition, any cable system may elect to carry the signal of any noncommercial educational translator station;

(3) Noncommercial educational television broadcast stations within whose specified zone the community of the system is located, in whole or in part;

(4) Commercial television broadcast stations that are significantly viewed in the community of the system. See § 76.54.

(b) In addition to the television broadcast signals carried pursuant to paragraph (a) of this section, any such cable television system may carry any additional television signals.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13866, July 14, 1972]

§ 76.59 Provisions for smaller television markets.

A cable television system operating in a community located in whole or in part within a smaller television market, as defined in § 76.5, shall carry television broadcast signals only in accordance with the following provisions:

(a) Any such cable television system may carry or, on request of the relevant station licensee or permittee, shall carry the signals of:

(1) Television broadcast stations within whose specified zone the community of the system is located, in whole or in part;

(2) Noncommercial educational television broadcast stations within whose Grade B contours the community of the system is located, in whole or in part;

(3) Commercial television broadcast stations licensed to communities in other smaller television markets, within whose Grade B contours the community of the system is located, in whole or in part;

(4) Television broadcast stations licensed to other communities which are generally considered to be part of the same smaller television market (Example: Burlington, Vt.—Plattsburgh, N.Y., television market);

(5) Television translator stations with 100 watts or higher power serving the community of the system and, as to cable systems that commence operations or expand channel capacity after March 30, 1972, noncommercial educational translator stations with 5 watts or higher power serving the community of the system. In addition, any cable system may elect to carry the signal of any noncommercial educational translator station;

(6) Commercial television broadcast stations that are significantly viewed in the community of the system. See § 76.54.

(b) Any such cable television system may carry sufficient additional signals so that, including the signals required to be carried pursuant to paragraph (a) of this section, it can provide the signals of a full network station of each of the major national television networks, and of one independent television station: *Provided, however,* That, in determining how many additional signals may be carried, any authorized but not operating television broadcast station that, if operational, would be required to be carried pursuant to paragraph (a)(1) of this section, shall be considered to be operational for a period terminating 18 months after grant of its initial construction permit. The following priorities are applicable to the additional television signals that may be carried:

(1) *Full network stations.* A cable television system may carry the nearest full network stations or the nearest in-state full network stations;

NOTE: The Commission may waive the requirements of this subparagraph for good cause shown in a petition filed pursuant to § 76.7.

(2) *Independent station.* A cable television system may carry any independent television station: *Provided, however,* That if a signal of a station in the first 25 major television markets (see § 76.51 (a)) is carried pursuant to this subparagraph, such signal shall be taken from one of the two closest such markets, where such signal is available.

NOTE: It is not contemplated that waiver of the provisions of this subparagraph will be granted.

(c) In addition to the noncommercial educational television broadcast signals carried pursuant to paragraph (a) of this section, any such cable television system may carry the signals of any noncommercial educational stations that are operated by an agency of the State within which the system is located. Such system may also carry any other noncommercial educational signals, in the absence of objection filed pursuant to § 76.7 by any local noncommercial educational station or State or local educational television authority.

(d) In addition to the television broadcast signals carried pursuant to paragraphs (a) through (c) of this section, any such cable television system may carry:

(1) Any television stations broadcasting predominantly in a non-English language; and

(2) Any television station broadcasting a network program that will not be carried by a station normally carried on the system. Carriage of such additional stations shall be only for the duration of the network programs not otherwise available, and shall not require prior Commission notification or approval in the certificating process.

(e) Where the community of a cable television system is wholly or partially within both one of the first 50 major television markets and a smaller television market, the carriage provisions for the first 50 major markets shall apply. Where the community of a system is wholly or partially within both one of the second 50 major television markets and a smaller television market, the carriage provisions for the second 50 major markets shall apply.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13867, July 14, 1972]

§ 76.61 Provisions for first 50 major television markets.

A cable television system operating in a community located in whole or in part within one of the first 50 major television markets listed in § 76.51(a) shall carry television broadcast signals only in accordance with the following provisions:

(a) Any such cable television system may carry, or on request of the relevant station licensee or permittee, shall carry the signals of:

(1) Television broadcast stations within whose specified zone the community of the system is located, in whole or in part: *Provided, however,* That where a cable television system is located in the designated community of a major television market, it shall not carry the signal of a television station licensed to a designated community in another major television market, unless the designated community in which the cable system is located is wholly within the specified zone (see § 76.5(f)) of the station, except as otherwise provided in this section;

(2) Noncommercial educational television broadcast stations within whose Grade B contours the community of the system is located, in whole or in part;

(3) Television translator stations with 100 watts or higher power serving the community of the system and, as to cable systems that commence operations or expand channel capacity after March 30, 1972, noncommercial educational translator stations with 5 watts or higher power serving the community of the system. In addition, any cable system may elect to carry the signal of any noncommercial educational translator station;

(4) Television broadcast stations licensed to other designated communities of the same major television market (Example: Cincinnati, Ohio-Newport, Ky., television market);

(5) Commercial television broadcast stations that are significantly viewed in the community of the system. See § 76.54.

(b) Any such cable television system may carry sufficient additional signals so that, including the signals required to be carried pursuant to paragraph (a) of this section, it can provide the signals of a full network station of each of the major national television networks, and of three independent television stations: *Provided, however,* That in determining how many additional signals may be carried, any authorized but not operating television broadcast station that, if operational, would be required to be carried pursuant to paragraph (a)(1) of this section, shall be considered to be operational for a period terminating 18 months after grant of its initial construction permit. The following priorities are applicable to the additional television signals that may be carried:

(1) *Full network stations.* A cable television system may carry the nearest full network stations, or the nearest in-State full network stations;

NOTE: The Commission may waive the requirements of this subparagraph for good cause shown in a petition filed pursuant to § 76.7.

(2) *Independent stations.* (i) For the first and second additional signals, if any, a cable television system may carry the signals of any independent television station: *Provided, however,* That if signals of stations in the first 25 major television markets (see § 76.51(a)) are carried pursuant to this subparagraph, such signals shall be taken from one or both of the two closest such markets, where such signals are available. If a third additional signal may be carried, a system shall carry the signal of any independent UHF television station located within 200 air miles of the reference point for the community of the system (see § 76.53), or, if there is no such station, either the signal of any independent VHF television station located within 200 air miles of the reference point for the community of the system, or the signal of any independent UHF television station.

NOTE: It is not contemplated that waiver of the provisions of this subparagraph will be granted.

(ii) Whenever, pursuant to Subpart F of this part, a cable television system is required to delete a television program on a signal carried pursuant to subdivision (i) of this subparagraph or paragraph (c) of this section, or a program on such a signal is primarily of local interest to the distant community (e.g., a local news or public affairs program), such system may, consistent with the program exclusivity rules of Subpart F of this part, substitute a program from any other television broadcast station. A program subsituted may be carried to its completion, and the cable system need not return to its regularly carried signal until it can do so without interrupting a program already in progress.

(c) After the service standards specified in paragraph (b) of this section have been satisfied, a cable television system may carry two additional independent television broadcast signals, chosen in accordance with the priorities specified in paragraph (b)(2) of this section: *Provided, however,* That the number of additional signals permitted under this paragraph shall be reduced by the number of signals added to the system pursuant to paragraph (b) of this section.

(d) In addition to the noncommercial educational television broadcast signals carried pursuant to paragraph (a) of this section, any such cable television system may carry the signals of any noncommericial educational stations that are operated by an agency of the State within which the system is located. Such system may also carry any other noncommercial educational signals, in the absence of objection filed pursuant to § 76.7 by any local noncommercial educational station or State or local educational television authority.

(e) In addition to the television broadcast signals carried pursuant to paragraphs (a) through (d) of this section, any such cable television system may carry:

(1) Any television stations broadcasting predominantly in a non-English language; and

(2) Any television station broadcasting a network program that will not be carried by a station normally carried on the system. Carriage of such additional stations shall be only for the duration of the network programs not otherwise available, and shall not require prior Commission notification or approval in the certificating process.

(f) Where the community of a cable television system is wholly or partially within both one of the first 50 major television markets and another television market, the provisions of this section shall apply.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13867, July 14, 1972]

§ 76.63 Provisions for second 50 major television markets.

(a) A cable television system operating in a community located in whole or in part within one of the second 50 major television markets listed in § 76.51(b) shall carry television broadcast signals only in accordance with the provisions of § 76.61, except that in paragraph (b) of § 76.61, the number of additional independent television signals that may be carried is two (2).

(b) Where the community of a cable television system is wholly or partially within both one of the second 50 major television markets and one of the first 50 major television markets, the carriage provisions for the first 50 major markets shall apply. Where the community of a system is wholly or partially within both one of the second 50 major television markets and a smaller television market, the provisions of this section shall apply.

§ 76.65 Grandfathering provisions.

The provisions of §§ 76.57, 76.59, 76.61, and 76.63 shall not be deemed to require the deletion of any television broadcast or translator signals which a cable television system was authorized to carry or was lawfully carrying prior to March 31, 1972: *Provided, however,* That if carriage of a signal has been limited by Commission order to discrete areas of a community, any expansion of service will be subject to the appropriate provisions of this subpart. If a cable television system in a community is authorized to carry signals, either by virtue of specific Commission authorization or otherwise, any other cable television system already operating or subsequently commencing operations in the same community may carry the same signals. (Any such new system shall, before instituting service, obtain a certificate of compliance, pursuant to § 76.11.)

Subpart E—[Reserved]

Subpart F—Program Exclusivity

§ 76.91 Stations entitled to network program exclusivity.

(a) Any cable television system operating in a community, in whole or in part, within the Grade B contour of any television broadcast station, or within the community of a 100-watt or higher power television translator station, and that carries the signal of such station shall, on request of the station licensee or permittee, maintain the station's exclusivity as an outlet for network programing against lower priority duplicating signals, but not against signals of equal priority, in the manner and to the extent specified in §§ 76.93 and 76.95.

(b) For purposes of this section, the order of priority of television signals carried by a cable television system is as follows:

(1) First, all television broadcast stations within whose principal community contours the community of the system is located, in whole or in part;

(2) Second, all television broadcast stations within whose Grade A contours the community of the system is located, in whole or in part;

(3) Third, all television broadcast stations within whose Grade B contours the community of the system is located, in whole or in part;

(4) Fourth, all television translator stations with 100 watts or higher power, licensed to the community of the system.

(c) If the signal of a television broadcast station licensed to a community in a smaller television market is carried by a cable television system, pursuant to § 76.57(a)(4), such signal shall, on request, be afforded network program exclusivity. This provision shall not be applicable to any signal authorized or lawfully carried by a cable television system prior to March 31, 1972.

§ 76.93 Extent of protection.

(a) Where the network programing of a television station is entitled to program exclusivity, the cable television system shall, on request of the station licensee or permittee, refrain from simultaneously duplicating any network program broadcast by such station, if the cable operator has received notification from the requesting station of the date and time of its broadcast of the program and the date and time of any broadcast to be deleted, as soon as possible and in any event no later than 48 hours prior to the broadcast to be deleted. On request of the cable system, such notice shall be given no later than the Monday preceding the calendar week (Sunday–Saturday) during which exclusivity is sought.

(b) Notwithstanding the provisions of paragraph (a) of this section, on request of a television station licensed to a community in the Mountain Standard Time Zone that is not one of the designated communities in the first 50 major television markets, a cable television system shall refrain from duplicating any network program broadcast by such station on the same day as its broadcast by the station. Where a cable system is required to provide same-day program exclusivity, the following provisions shall be applicable:

(1) A cable television system need not delete reception of a network program if, in so doing, it would leave available for reception by subscribers, at any time, less than the programs of two networks (including those broadcast by any stations whose signals are being carried and whose program exclusivity is being protected pursuant to the requirements of this section);

(2) A system need not delete reception of a network program which is scheduled by the network between the hours of 6 and 11 p.m., eastern time, but is broadcast by the station requesting deletion, in whole or in part, outside of the period which would normally be considered prime time for network programing in the time zone involved.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13867, July 14, 1972]

§ 76.95 Exceptions.

Notwithstanding the requirements of § 76.93:

(a) A cable television system need not delete reception of any program which would be carried on the system in color but will be broadcast in black and white by the station requesting deletion.

(b) The Commission will give full effect to private agreements between operators of cable television systems and local television stations which provide for a type or degree of network exclusivity which differs from the requirements of §§ 76.91 and 76.93.

§ 76.97 Waiver petitions.

Where a petition for waiver of the provisions of §§ 76.91 and 76.93 is filed within fifteen (15) days after a request for program exclusivity is received by the operator of a cable television system, such system need not provide program exclusivity pending the Commission's ruling on the petition or on the question of temporary relief pending further proceedings.

§ 76.99 Grandfathering.

The provisions of §§ 76.91, 76.93, 76.151, and 76.153 shall not be deemed to deprive a television station whose signal was carried by a cable television system prior to March 31, 1972, of the nonnetwork program exclusivity rights that such station had on March 30, 1972: *Provided, however,* That such exclusivity rights shall extend only to simultaneous duplication of programing by lower priority television stations, unless the station whose exclusivity rights are at issue is entitled to same-day network program exclusivity pursuant to § 76.93(b), in which case that station shall also be entitled to continued same-day nonnetwork program exclusivity.

[37 F.R. 13867, July 14, 1972]

§ 76.151 Syndicated program exclusivity; extent of protection.

Upon receiving notification pursuant to § 76.155:

(a) No cable television system, operating in a community in whole or in part within one of the first 50 major television markets, shall carry a syndicated program, pursuant to § 76.61 (b), (c), (d), or (e), for a period of 1 year from the date that program is first licensed or sold as a syndicated program to a television station in the United States for television broadcast exhibition;

(b) No cable television system, operating in a community in whole or in part within a major television market, shall carry a syndicated program, pursuant to §§ 76.61 (b), (c), (d), or (e), or 76.63(a) (as it refers to § 76.61 (b), (c), (d), or (e)), while a commercial television station licensed to a designated community in that market has exclusive broadcast exhibition rights (both over-the-air and by cable) to that program: *Provided, however,* That if a commercial station licensed to a designated community in one of the second 50 major television markets has such exclusive rights, a cable television system located in whole or in part within the market of such station may carry such syndicated programs in the following circumstances:

(1) If the program is carried by the cable television system in prime time and will not also be broadcast by a commercial market station in prime time during the period for which there is exclusivity for the program;

(2) For off-network series programs:

(i) Prior to the first nonnetwork broadcast in the market of an episode in the series;

(ii) After a nonnetwork first-run of the series in the market or after 1 year from the date of the first nonnetwork broadcast in the market of an episode in the series, whichever occurs first;

(3) For first-run series programs:

(i) Prior to the first broadcast in the market of an episode in the series;

(ii) After two (2) years from the first broadcast in the market of an episode in the series;

(4) For first-run, nonseries programs:

(i) Prior to the date the program is available for broadcast in the market under the provision of any contract or license of a television broadcast station in the market;

(ii) After two (2) years from the date of such first availability;

(5) For feature films:

(i) Prior to the date such film is available for nonnetwork broadcast in the market under the provisions of any contract or license of a television broadcast station in the market;

(ii) Two (2) years after the date of such first availability;

(6) For other programs: 1 day after the first nonnetwork broadcast in the market or 1 year from the date of purchase of the program for nonnetwork broadcast in the market, whichever occurs first.

NOTE 1: For purposes of § 76.151, a series will be treated as a unit, that is:

(i) No episode of a series (including an episode in a different package of programs in the same series) may be carried by a cable television system, pursuant to §§ 76.61 (b), (c), (d), or (e) or 76.63(a) (as it refers to § 76.61 (b), (c), (d), or (e)) while any episodes of the series are subject to exclusivity protection.

(ii) In the second 50 major television markets, no exclusivity will be afforded a different package of programs in the same series after the initial exclusivity period has terminated.

NOTE 2: As used in this section, the phrase "broadcast in the market" or "broadcast by a market station" refers to a broadcast by a television station licensed to a designated community in the market.

§ 76.153 Parties entitled to exclusivity.

(a) Copyright holders of syndicated programs shall be entitled to the exclusivity provided by § 76.151(a). In order to receive such exclusivity, the copyright holder shall notify each cable system of the exclusivity sought in accordance with the requirements of § 76.155.

(b) Television broadcast stations licensed to designated communities in the major television markets shall be entitled to the exclusivity provided by § 76.151(b). In order to receive such exclusivity, such television stations shall notify each cable system of the exclusivity sought in accordance with the requirements of § 76.155.

(c) In order to be entitled to exclusivity for a program under § 76.151(b), a television station must have an exclusive right to broadcast that program against all other television stations licensed to the same designated community and against broadcast signal cable carriage of that program in the cable system community: *Provided, however*, That such exclusivity will not be recognized in a designated community of another major television market unless such community is wholly within the television market of the station seeking exclusivity. In hyphenated markets, exclusivity will be recognized beyond the specified zone of a station only to the extent the station has exclusivity against other stations in the designated communities of the market. In such instances, exclusivity to the extent a station has obtained it will be recognized within the specified zones of such other stations. It shall be presumed that broadcast rights acquired prior to March 31, 1972, are exclusive for the specified zones of all stations in the market in which the station is located.

§ 76.155 Notification.

(a) Syndicated program exclusivity notifications shall include the following information:

(1) For purposes of § 76.151(a):

(i) The name and address of the copyright holder requesting exclusivity;

(ii) The name of the program or series for which exclusivity is sought;

(iii) The date of first sale or license of the program for television broadcast as a syndicated program in the United States.

(2) For purposes of § 76.151(b):

(i) The name and address of the television broadcast station requesting for which exclusivity is sought; exclusivity;

(ii) The name of the program or series

(iii) The dates on which exclusivity is to commence and terminate;

(iv) As to programs to be deleted from signals regularly carried by the system pursuant to §§ 76.61 (b), (c), (d), or (e) and 76.63(a) (as it refers to § 76.61 (b), (c), (d), or (e)): the name of the program; the call letters of the station from which the deletion is to be made; and the date, time, and duration of the deletion. Information, once supplied pursuant to subparagraphs (2) (i), (ii), (iii), or (3) of this paragraph, need not be repeated in any notification supplying the information required by this subparagraph.

(3) For purposes of § 76.151(b) (as it relates to television stations licensed to designated communities in the second 50 major television markets), the following information shall be supplied in addition to that required by subparagraph (2) of this paragraph:

(i) Whether the program will be broadcast in prime time by the station requesting exclusivity during the period of protection provided in § 76.151(b);

(ii) The specific rule pursuant to which exclusivity is requested (e.g., § 76.151(b)(2)—off-network series, § 76.151(b)(3)—first-run series);

(iii) For off-network series programs, the number of showings contracted for, including the number of repeat presentations, if any, and the date when the first run is to end.

(b) Subject to the provisions of paragraph (c) of this section, notifications given pursuant to § 76.151 must be received no later than the Monday preceding the calendar week (Sunday-Saturday) during which exclusivity is sought.

(c) Direct notice of a change in the schedule of a television station against which exclusivity is sought, given to a cable television system by a television station seeking exclusivity, shall, if given more than 36 hours prior to the time a deletion is to be made, supersede prior notifications containing the information required by paragraph (a) of this section and any information otherwise relied on pursuant to paragraph (d) of this section.

(d) In determining which programs must be delegated from a television signal when such information is not required to be provided pursuant to paragraph (a) of this section, a cable television system may rely on information from any of the following sources published or made available during the week the deletion is to be made or during the prior week:

(i) Newspapers or journals of general circulation in the service area of a television station whose programs may be subject to deletion;

(ii) A television station whose programs may be subject to deletion;

(iii) Any television station requesting exclusivity.

§ 76.157 Exclusivity contracts.

With respect to each program as to which a television broadcast station licensee or permittee requests exclusivity pursuant to § 76.151, such licensee or permittee shall maintain in its public file an exact copy of those portions of the exclusivity contract, such portions to be signed by both the copyright holder and the licensee or permittee, setting forth in full the provisions pertinent to the duration, nature, and extent of the exclusivity terms concerning broadcast signal exhibition (whether over-the-air or by cable) to which the parties have agreed.

§ 76.159 Grandfathering.

The provisions of § 76.151 shall not be deemed to require a cable television system to delete programing from any signal that was carried prior to March 31, 1972, or that any other cable television system in the same community was carrying prior to March 31, 1972: *Provided, however*, That if carriage of a signal has been limited by Commission order to discrete areas of a community, any expansion of service will be subject to the appropriate provisions of the subpart.

Subpart G—Cablecasting

§ 76.201 Origination cablecasting in conjunction with carriage of broadcast signals.

(a) No cable television system having 3,500 or more subscribers shall carry the signal of any television broadcast station unless the system also operates to a significant extent as a local outlet by origination cablecasting and has available facilities for local production and presentation of programs other than automated services. Such origination cablecasting shall be limited to one or more designated channels which may be used for no other cablecasting purpose.

(b) No cable television system located outside of all major television markets shall enter into any contract, arrangement, or lease for use of its cablecasting facilities which prevents or inhibits the use of such facilities for a substantial portion of time (including the time period 6–11 p.m.) for local programing designed to inform the public on controversial issues of public importance.

(c) No cable television system shall carry the signal of any television broadcast station if the system engages in origination cablecasting, either voluntarily or pursuant to paragraph (a) of this section, unless such cablecasting is conducted in accordance with the provisions of §§ 76.205, 76.209, 76.213, 76.215, 76.217, 76.221, and 76.225.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13867, July 14, 1972]

§ 76.205 Origination cablecasts by candidates for public office.

(a) *General requirements.* If a cable television system shall permit any legally qualified candidate for public office to use its origination channel(s) and facilities therefor, it shall afford equal opportunities to all other such candidates for that office: *Provided, however,* That such system shall have no power by censorship over the material cablecast of any such candidate; *And provided, further,* That an appearance by a legally qualified candidate on any:

(1) Bona fide newscast,

(2) Bona fide news interview,

(3) Bona fide news documentary (if the appearance of the candidate is incidental to the presentation of the subject or subjects covered by the news documentary), or

(4) On-the-spot coverage of bona fide news events (including but not limited to political conventions and activities incidental thereto),

shall not be deemed to be use of the facilities of the system within the meaning of this paragraph.

NOTE: The fairness doctrine is applicable to these exempt categories. See § 76.209.

(b) *Rates and practices.* (1) The rates, if any, charged all such candidates for the same office shall be uniform, shall not be rebated by any means direct or indirect, and shall not exceed the charges made for comparable origination use of such facilities for other purposes.

(2) In making facilities available to candidates for public office no cable television system shall make any discrimination between candidates in charges, practices, regulations, facilities, or services for or in connection with the service rendered, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any cable television system make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to cablecast to the exclusion of other legally quali-

fied candidates for the same public office.

(c) *Records, inspections.* Every cable television system shall keep and permit public inspection of a complete record of all requests for origination cablecasting time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the system of such requests, the charges made, if any, and the length and time of cablecast, if the request is granted. Such records shall be retained for a period of 2 years.

(d) *Time of request.* A request for equal opportunities for use of the origination channel(s) must be submitted to the cable television system within one (1) week of the day on which the first prior use, giving rise to the right of equal opportunities, occurred: *Provided, however,* That where a person was not a candidate at the time of such first prior use, he shall submit his request within one (1) week of the first subsequent use after he has become a legally qualified candidate for the office in question.

(e) *Burden of proof.* A candidate requesting such equal opportunities of the cable television system, or complaining of noncompliance to the Commission, shall have the burden of proving that he and his opponent are legally qualified candidates for the same public office.

§ 76.209 Fairness doctrine; personal attacks; political editorials.

(a) A cable television system engaging in origination cablecasting shall afford reasonable opportunity for the discussion of conflicting views on issues of public importance.

NOTE: See public notice, "Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance," 29 F.R. 10415.

(b) When, during such origination cablecasting, an attack is made upon the honesty, character, integrity, or like personal qualities of an identified person or group, the cable television system shall, within a reasonable time and in no event later than one (1) week after the attack, transmit to the person or group attacked: (1) Notification of the date, time, and identification of the cablecast; (2) a script or tape (or an accurate summary if a script or tape is not available) of the attack; and (3) an offer of a reasonable opportunity to respond over the system's facilities.

(c) The provisions of paragraph (b) of this section shall not be applicable: (1) To attacks on foreign groups or foreign public figures; (2) to personal attacks which are made by legally qualified candidates, their authorized spokesmen, or those associated with them in the campaign, on other such candidates, their authorized spokesmen, or persons associated with the candidates in the campaign; and (3) to bona fide newscasts, bonafide news interviews, and on-the-spot coverage of a bona fide news event (including commentary or analysis contained in the foregoing programs, but the provisions of paragraph (b) of this section shall be applicable to editorials of the cable television system).

(d) Where a cable television system, in an editorial, (1) endorses or (2) opposes a legally qualified candidate or candidates, the system shall, within 24 hours after the editorial, transmit to respectively (i) the other qualified candidate or candidates for the same office, or (ii) the candidate opposed in the editorial, (*a*) notification of the date, time, and channel of the editorial; (*b*) a script or tape of the editorial; and (*c*) an offer of a reasonable opportunity for a candidate or a spokesman of the candidate to respond over the system's facilities: *Provided, however,* That where such editorials are cablecast within 72 hours prior to the day of the election, the system shall comply with the provisions of this paragraph sufficiently far in advance of the broadcast to enable the candidate or candidates to have a reasonable opportunity to prepare a response and to present it in a timely fashion.

§ 76.213 Lotteries.

(a) No cable television system when engaged in origination cablecasting shall transmit or permit to be transmitted on the origination cablecasting channel or channels any advertisement of or information concerning any lottery, gift enterprise, or similar scheme, offering prizes dependent in whole or in part upon lot or chance, or any list of the prizes drawn or awarded by means of any such lottery, gift enterprise, or scheme, whether said list contains any part or all of such prizes.

(b) The determination whether a particular program comes within the provisions of paragraph (a) of this section depends on the facts of each case. However, the Commission will in any event consider that a program comes within the provisions of paragraph (a) of this section if in connection with such program a prize consisting of money or thing of value is awarded to any person whose selection is dependent in whole or in part upon lot or chance, if as a condition of winning or competing for such prize, such winner or winners are required to furnish any money or thing of value or are required to have in their possession any product sold, manufactured, furnished, or distributed by a sponsor of a program cablecast on the system in question.

§ 76.215 Obscenity.

No cable television system when engaged in origination cablecasting shall transmit or permit to be transmitted on the origination cablecasting channel or channels material that is obscene or indecent.

§ 76.217 Advertising.

A cable television system engaged in origination cablecast programing may present advertising material at the beginning and conclusion of each such program and at natural intermissions or breaks within a cablecast: *Provided, however,* That the system itself does not interrupt the presentation of program material in order to intersperse advertising: *And provided, further,* That advertising material is not presented on or in connection with origination cablecasting in any other manner.

NOTE: The term "natural intermissions or breaks within a cablecast" means any natural intermission in the program material which is beyond the control of the cable television operator, such as time-out in a sporting event, an intermission in a concert or dramatic performance, a recess in a city council meeting, an intermission in a long motion picture which was present at the time of theatre exhibition, etc.

§ 76.221 Sponsorship identification.

(a) When a cable television system engaged in origination cablecasting presents any matter for which money, services, or other valuable consideration is either directly or indirectly paid or promised to, or charged or received by, such system, the system shall make an announcement that such matter is sponsored, paid for, or furnished, either in whole or in part, and by whom or on whose behalf such consideration was supplied: *Provided, however,* That "service or other valuable consideration" shall not include any service or property furnished without charge or at a nominal charge for use on, or in connection with, such cablecasting unless it is so furnished as consideration for an identification in a cablecast of any person, product, service, trademark, or brand name beyond an identification which is reasonably related to the use of such service or property on the cablecast.

(b) Each system engaged in origination cablecasting shall exercise reasonable diligence to obtain from its employees, and from other persons with whom it deals directly in connection with any program matter for origination cablecasting, information to enable it to make the announcement required by this section.

(c) In the case of any political program or any program involving the discussion of public controversial issues for which any films, records, transcriptions, talent, script, or other material or services of any kind are furnished, either directly or indirectly, to a cable television system as an inducement to the origination cablecasting of such program, an announcement to this effect shall be made at the beginning and conclusion of such program: *Provided, however,* That only one such announcement need be made in the case of any such program of five (5) minutes' duration or less, either at the beginning or conclusion of the program.

(d) The announcements required by this section are waived with respect to feature motion picture films produced initially and primarily for theater exhibition.

§ 76.225 Per-program or per-channel charges for reception of cablecasts.

(a) Origination or access cablecasting operations for which a per-program or per-channel charge is made shall comply with the following requirements:

(1) Feature films shall not be cablecast which have had general release in theaters anywhere in the United States more than two (2) years prior to their cablecast: *Provided, however,* That during 1 week of each calendar month one feature film the general release of which occurred more than ten (10) years previously may be cablecast, and more than a single showing of such film may be made during that week: *Provided, further,* That feature films the general release of which occurred between two (2) and ten (10) years before proposed cablecast may be cablecast upon a convincing showing to the Commission that bona fide attempt has been made to sell

the films for conventional television broadcasting and that they have been refused, or that the owner of the broadcast rights to the films will not permit them to be televised on conventional television because he has been unable to work out satisfactory arrangements concerning editing for presentation thereon, or perhaps because he intends never to show them on conventional television since to do so might impair their repetitive box office potential in the future.

NOTE: As used in this subparagraph, "general release" means the first-run showing of a feature film in a theatre or theatres in an area, on a nonreserved-seat basis, with continuous performances. For first-run showing of feature films on a nonreserved-seat basis which are not considered to be "general release" for purposes of this subparagraph, see note 56 in Fourth Report and Order in Docket No. 11279, 15 FCC 2d 466.

(2) Sports events shall not be cablecast which have been televised live on a nonsubscription, regular basis in the community during the two (2) years preceding their proposed cablecast: *Provided, however,* That if the last regular occurrence of a specific event (e.g., summer Olympic games) was more than two (2) years before proposed showing on cable television in a community and the event was at that time televised on conventional television in that community, it shall not be cablecast.

NOTE 1: In determining whether a sports event has been televised in a community on a nonsubscription basis, only commercial television broadcast stations which place a Grade A contour over the entire community will be considered. Such stations need not necessarily be licensed to serve that community.

NOTE 2: The manner in which this subparagraph will be administered and in which "sports," "sports events," and "televised live on a nonsubscription regular basis" will be construed is explained in paragraphs 288–305 in Fourth Report and Order in Docket No. 11279, 15 FCC 2d 466.

(3) No series type of program with interconnected plot or substantially the same cast of principal characters shall be cablecast.

(4) Not more than 90 percent of the total cablecast programing hours shall consist of feature films and sports events combined. The percentage calculations may be made on a yearly basis, but, absent a showing of good cause, the percentage of such programing hours may not exceed 95 percent of the total cablecast programing hours in any calendar month.

(5) No commercial advertising announcements shall be carried on such channels during such operations except, before and after such programs, for promotion of other programs for which a per-program or per-channel charge is made.

§ 76.251 Minimum channel capacity; access channels.

(a) No cable television system operating in a community located in whole or in part within a major television market, as defined in § 76.5, shall carry the signal of any television broadcast station unless the system also complies with the following requirements concerning the availability and administration of access channels:

(1) *Minimum channel capacity.* Each such system shall have at least 120 MHz of bandwidth (the equivalent of 20 television broadcast channels) available for immediate or potential use for the totality of cable services to be offered;

(2) *Equivalent amount of bandwidth.* For each Class I cable channel that is utilized, such system shall be capable of providing an additional channel, 6 MHz in width, suitable for transmission of Class II or Class III signals (see § 76.5 for cable channel definitions);

(3) *Two-way communications.* Each such system shall maintain a plant having technical capacity for nonvoice return communications;

(4) *Public access channel.* Each such system shall maintain at least one specially designated, noncommercial public access channel available on a first-come, nondiscriminatory basis. The system shall maintain and have available for public use at least the minimal equipment and facilities necessary for the production of programing for such a channel. See also § 76.201;

(5) *Education access channel.* Each such system shall maintain at least one specially designated channel for use by local educational authorities;

(6) *Local government access channel.* Each such system shall maintain at least one specially designated channel for local government uses;

(7) *Leased access channels.* Having satisfied the origination cablecasting requirements of § 76.201, and the requirements of subparagraphs (4), (5), and (6) of this paragraph for specially designated access channels, such system shall

offer other portions of its nonbroadcast bandwidth, including unused portions of the specially designated channels, for leased access services. However, these leased channel operations shall be undertaken with the express understanding that they are subject to displacement if there is a demand to use the channels for their specially designated purposes. On at least one of the leased channels, priority shall be given part-time users;

(8) *Expansion of access channel capacity*. Whenever all of the channels described in subparagraphs (4) through (7) of this paragraph are in use during 80 percent of the weekdays (Monday–Friday) for 80 percent of the time during any consecutive 3-hour period for 6 consecutive weeks, such system shall have 6 months in which to make a new channel available for any or all of the above-described purposes;

(9) *Program content control*. Each such system shall exercise no control over program content on any of the channels described in subparagraphs (4) through (7) of this paragraph; however, this limitation shall not prevent it from taking appropriate steps to insure compliance with the operating rules described in subparagraph (11) of this paragraph;

(10) *Assessment of costs*. (i) From the commencement of cable television service in the community of such system until five (5) years after completion of the system's basic trunk line, the channels described in subparagraphs (5) and (6) of this paragraph shall be made available without charge.

(ii) One of the public access channels described in subparagraph (4) of this paragraph shall always be made available without charge, except that production costs may be assessed for live studio presentations exceeding 5 minutes. Such production costs and any fees for use of other public access channels shall be consistent with the goal of affording the public a low-cost means of television access;

(11) *Operating rules*. (i) For the public access channel(s), such system shall establish rules requiring first-come nondiscriminatory access; prohibiting the presentation of: Any advertising material designed to promote the sale of commercial products or services (including advertising by or on behalf of candidates for public office); lottery information; and obscene or indecent matter (modeled after the prohibitions in §§ 76.213 and 76.215, respectively); and permitting public inspection of a complete record of the names and addresses of all persons or groups requesting access time. Such a record shall be retained for a period of 2 years.

(ii) For the educational access channel(s), such system shall estabish rules prohibiting the presentation of: Any advertising material designed to promote the sale of commercial products or services (including advertising by or on behalf of candidates for public office); lottery information; and obscene or indecent matter (modeled after the prohibitions in §§ 76.213 and 76.215, respectively) and permitting public inspection of a complete record of the names and addresses of all persons or groups requesting access time. Such a record shall be retained for a period of 2 years.

(iii) For the leased channel(s), such system shall establish rules requiring first-come, nondiscriminatory access; prohibiting the presentation of lottery information and obscene or indecent matter (modeled after the prohibitions in §§ 76.213 and 76.215, respectively); requiring sponsorship identification (see § 76.221); specifying an appropriate rate schedule and permitting public inspection of a complete record of the names and addresses of all persons or groups requesting time. Such a record shall be retained for a period of 2 years.

(iv) The operating rules governing public access, educational, and leased channels shall be filed with the Commission within 90 days after a system first activates any such channels, and shall be available for public inspection at the system's offices. Except on specific authorization, or with respect to the operation of the local government access channel, no local entity shall prescribe any other rules concerning the number or manner of operation of access channels; however, franchise specifications concerning the number of such channels for systems in operation prior to March 31, 1972, shall continue in effect.

(b) No cable television system operating in a community located wholly outside of all major television markets shall be required by a local entity to exceed the provisions concerning the availability and administration of access channels contained in paragraph (a) of this section. If a system provides any access programing, it shall comply with paragraphs (a) (9), (10), and (11) of this section.

(c) The provisions of this section shall apply to all cable television systems that commence operations on or after March 31, 1972, in a community located in whole or in part within a major television market. Systems that commenced operations prior to March 31, 1972, shall comply on or before March 31, 1977: *Provided, however,* That, if such systems begin to provide any of the access services described above at an earlier date, they shall comply with paragraph (a)(9), (10), and (11) of this section at that time: *And provided, further,* That if such systems receive certificates of compliance to add television signals to their operations at an earlier date, pursuant to § 76.61(b) or (c), or § 76.63(a) (as it relates to § 76.61(b) or (c)), for each such signal added, such systems shall provide one (1) access channel in the following order of priority—(1) public access, (2) education access, (3) local government access, and (4) leased access—and shall comply with the appropriate requirements of paragraphs (a)(4)-(7) and (a)(9)-(11) of this section with respect thereto.

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13867, July 14, 1972]

Subpart H—General Operating Requirements

§ 76.301 Copies of rules.

The operator of a cable television system shall have a current copy of Part 76, and is expected to be familiar with the rules governing cable television systems. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at nominal cost.

§ 76.305 Logging and recordkeeping requirements.

(a) *Carriage of certain television signals.* (1) A cable television system operating in a community located in whole or in part within a major television market shall keep and permit public inspection of a record of all television signals carried pursuant to §§ 76.61 (b), (c), (d), or (e) or 76.63(a) (as it refers to § 76.61 (b), (c), (d), or (e)). Such record shall include the call letters and location of each such station whose signals are carried, the date and specific starting and ending time of such carriage, and the names of the programs scheduled to be shown. This record shall be retained for a period of 2 years.

(2) This paragraph shall be applicable only to television signals whose carriage commenced on or after March 31, 1972.

(b) *Origination cablecasts by candidates for public office.* See § 76.205(c).

(c) *Public access channels.* See § 76.251 (a)(11).

(d) *Educational access channels.* See § 76.251(a)(11).

(e) *Leased access channels.* See § 76.251(a)(11).

(f) *Equal employment opportunities.* See § 76.311(f).

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 6590, Mar. 31, 1972]

§ 76.311 Equal employment opportunities.

The following provisions apply to all operators of cable television systems, both in that capacity and as licensees or permittees of cable television relay stations. Where a cable system or a headquarters office has employees whose duties are related to the operation of a cable television relay station, these employees shall be considered employees of the cable system or headquarters office employment unit for purposes of this section.

(a) *General policy.* Equal opportunity in employment shall be afforded by all operators of cable television systems to all qualified persons, and no person shall be discriminated against in employment because of race, color, religion, national origin, or sex.

(b) *Equal employment opportunity program.* (1) Each cable television system shall establish, maintain, and carry out a positive continuing program of specific practices designed to assure equal opportunity in every aspect of system employment policy and practice.

(2) Under the terms of its program, a system shall:

(i) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance;

(ii) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation;

(iii) Communicate the system's equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin, or sex, and solicit their recruitment assistance on a continuing basis;

(iv) Conduct a continuing program to exclude every form of prejudice or discrimination based upon race, color, religion, national origin, or sex from the system's personnel policies and practices and working conditions;

(v) Conduct continuing review of job structure and employment practices and adopt positive recruitment, training, job design, and other measures needed to assure genuine equality of opportunity to participate fully in all organizational units, occupations, and levels of responsibility in the system.

(3) Where two or more cable television systems under common ownership or control are so interrelated in their management, operations, and utilization of employees as to constitute a single employment unit, the program shall be jointly established, maintained, and carried out by them. (Under other circumstances, the term "single employment unit" refers to an individual cable television system or to a headquarters office.)

(c) *Additional information to be furnished to the Commission*—(1) *Equal employment programs to be filed by operators of systems.* (i) The operator of each cable television system shall file a statement of its equal employment opportunity program not later than June 30, 1972, indicating specific practices to be followed in order to assure equal employment opportunity for females, Negroes, Orientals, American Indians, and Spanish-surnamed Americans in such aspects of employment practices as recruitment, selection, training, placement, promotion, pay, working conditions, demotion, layoff, and termination.

(*a*) Any changes or amendments to existing programs shall be filed with the Commission on or before May 31 of each year thereafter.

(*b*) If the system (*1*) has fewer than five full-time employees, and (2) does not (within the meaning of paragraph (b)(3) of this section together with other cable television systems constitute a single employment unit with an aggregate total of five or more full-time employees, an equal employment opportunity program statement need not be filed for the employment unit which consists of or includes the system.

(*c*) (*1*) Where, pursuant to paragraph (b)(3), a program is jointly established by two or more cable systems with an aggregate total of 5 or more full-time employees, a multiple cable operator shall file a combined statement. (*2*) A multiple cable operator shall file a separate equal employment opportunity program statement for each headquarters office if that office has five or more full-time employees, and its work is primarily related to the operation of more than one cable television system under common ownership or control.

(*d*) If, pursuant to (*b*) of this subdivision or § 76.13(a)(8), a cable operator has been exempted from the requirement that it file an equal employment opportunity program statement, but has failed to satisfy the conditions of that exemption at any time during the first 3 months of a calendar year, it shall file the statement on or before May 31 of that year.

(2) *Contents of the equal employment program statement.* The program should reasonably address itself to such specific areas as set forth below, to the extent that they are appropriate in terms of employment unit size, location, etc.

(i) *To assure nondiscrimination in employment.* (*a*) Posting notices in the cable operator's offices and places of employment informing employees, and applicants for employment, of their equal employment opportunity rights, and their right to notify the Equal Employment Opportunity Commission, the Federal Communications Commission, or other appropriate agency if they believe they have been discriminated against. Where a significant percentage of employees, employment applicants, or residents of the community of a cable television system are Spanish-surnamed Americans, such notice should be posted in Spanish and English. Similar use should be made of other languages in such posted equal employment opportunity notices, where appropriate;

(*b*) Placing a notice in bold type on the employment application informing prospective employees that discrimination because of sex, race, color, religion, or national origin is prohibited and that they may notify the Equal Employment Opportunity Commission, the Federal Communications Commission, or other appropriate agency if they believe they have been discriminated against;

(*c*) Placing employment advertisements in media that have significant circulation among minority-group people in the recruiting area;

(*d*) Recruiting through schools and colleges with significant minority-group enrollments;

(*e*) Maintaining systematic contacts with minority and human relations organizations, leaders, and spokesmen to encourage referral of qualified minority or female applicants;

(*f*) Encouraging present employees to refer minority or female applicants;

(*g*) Making known to the appropriate recruitment sources in the employer's immediate area that qualified minority members and females are being sought for consideration whenever the cable operator hires.

(ii) *To assure nondiscrimination in selection and hiring.* (*a*) Instructing personally those on the staff of the system who make hiring decisions that all applicants for all jobs are to be considered without discrimination;

(*b*) Where union agreements exist, cooperating with the union or unions in the development of programs to assure qualified minority persons or females of equal opportunity for employment, and including an effective nondiscrimination clause in new or renegotiated union agreements;

(*c*) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iii) *To assure nondiscriminatory placement and promotion.* (*a*) Instructing personally those of the system's staff who make decisions on placement and promotion that minority employees and females are to be considered without discrimination, and that job areas in which there is little or no minority or female representation should be reviewed to determine whether this results from discrimination;

(*b*) Giving minority groups and female employees equal opportunity for positions which lead to higher positions. Inquiring as to the interest and skills of all lower paid employees with respect to any of the higher paid positions, followed by assistance, counselling, and effective measures to enable employees with interest and potential to qualify themselves for such positions;

(*c*) Reviewing seniority practices to insure that such practices are nondiscriminatory and do not have a discriminatory effect;

(*d*) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iv) *To assure nondiscrimination in other areas of employment practices.* (*a*) Examining rates of pay and fringe benefits for present employees with equivalent duties, and adjusting any inequities found;

(*b*) Providing opportunity to perform overtime work on a basis that does not discriminate against qualified minority group or female employees.

(d) *Report of complaints filed against operators of systems.* (1) All operators of cable television systems shall submit an annual report to the Commission no later than May 31 of each year indicating whether any complaints regarding violations by the operator of equal employment provisions of Federal, State, Territorial, or local law have been filed during the preceding calendar year before any body having competent jurisdiction.

(i) The report shall state with respect to each such complaint: The parties involved, the date filed, the courts or agencies before which the matter has been heard, the appropriate file number (if any), and the respective disposition or current status of the complaint.

(ii) Any cable operator who has filed such information with the Equal Employment Opportunity Commission need not do so with the Federal Communications Commission, if such previous filing is indicated.

(e) *Report of annual employment.* (1) Each operator of a cable television system with five or more full-time employees (including those whose duties are related to the operation of a cable television relay station) shall file with the Commission, on or before May 31 of each year, on FCC Form 395, an annual employment report.

(2) (i) Where pursuant to paragraph (b)(3) of this section, an equal employment opportunity program is jointly established by two or more cable television systems with an aggregate total of five or more full-time employees, a combinded (single employment unit) annual employment report shall be filed.

(ii) A multiple cable operator shall file a separate annual employment report for each headquarters office if that office has five or more full-time employees, and its work is primarily related to the operation of more than one cable television system under common ownership or control.

(iii) Where, pursuant to subdivisions (i) and (ii) of this subparagraph, if more than one annual employment report is filed with respect to (*a*) cable television systems under common ownership or control, or (*b*) headquarters offices performing work related to such systems, a multiple cable operator shall also file a consolidated report, covering all system and headquarters office employees included in those reports.

(3) The data contained in each annual employment report required by subparagraphs (1) and (2) (i) and (ii) of this paragraph shall reflect the figures from any one payroll period in January, February, or March of the year during which the report is filed. The same payroll period should be used in each year's annual employment report.

(4) Annual employment reports required by this paragraph shall be filed on or before May 31 of each year.

(f) *Records available to the public*—(1) *Commission records*. A copy of every annual employment report, equal employment opportunity program, and reports on complaints regarding violation of equal employment provisions of Federal, State, territorial, or local law, and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the cable operator and the Commission pertaining to the reports after they have been filed and all documents incorporated therein by reference, are open for public inspection at the offices of the Commission.

(2) *Records to be maintained locally for public inspection by operators*—(i) *Records to be maintained*. Each operator of a cable television system required to file annual employment reports, equal employment opportunity programs, and annual reports on complaints regarding violations of equal employment provisions of Federal, State, territorial, or local law shall maintain, for public inspection, a file containing a copy of each such report and copies of all exhibits, letters, and other documents filed as part thereto, all correspondence between the cable operator and the Commission pertaining to the reports after they have been filed and all documents incorporated therein by reference. An employer who is required to file a consolidated annual employment report shall maintain an adequately indexed consolidated equal employment opportunity file, containing copies of all the material included in the equal employment opportunity files of the headquarters offices and other employment units reported upon in his consolidated annual employment report.

(ii) *Period of retention*. The documents specified in subdivision (i) of this subparagraph shall be maintained for a period of 5 years.

(iii) *Where maintained*. The equal employment opportunity file for a system (or a single employment unit including that system) shall be maintained at the principal workplace of the employment unit, or at any accessible location (such as a public registry for documents or an attorney's office) in the principal community served by the employment unit. The headquarters office equal employment opportunity file and the consolidated equal employment opportunity file shall be maintained (*a*) respectively, at the headquarters office and the principal office of the employer, or (*b*) at any accessible place (such as a public registry for documents or an attorney's office) in the community in which the office is located. The employer shall provide reasonable accommodations at these locations for undisturbed inspection of his equal employment opportunity records by members of the public during regular business hours.

[37 F.R. 6590, Mar. 31, 1972, as amended at 37 F.R. 7083, Apr. 8, 1972]

Subpart I—Forms and Reports

§ 76.401 Annual report of cable television systems.

An "Annual Report of Cable Television Systems" (FCC Form 325) shall be filed with the Commission for each cable television system, as defined in § 76.5, on or before March 1 of each year, for the preceding calendar year.

§ 76.405 Cable television annual financial report.

A "Cable Television Annual Financial Report" (FCC Form 326) shall be filed with the Commission for each cable television system, as defined in § 76.5, on or before April 1 of each year, for the preceding calendar year: *Provided, however*, That a cable television system which commences operations prior to December 1, 1971, may report on a fiscal year basis, in which case Form 326 shall be filed annually no more than ninety (90) days after the close of the system's fiscal year.

§ 76.406 Computation of cable television annual fee.

A "Computation of Cable Television Annual Fee" (FCC Form 326–A) shall be filed with the Commission for each cable television system, as defined in § 76.5, on or before April 1 of each year, for the preceding calendar year, to accompany payment of the cable television annual fee. See §§ 1.1101 and 1.1116.

§ 76.409 Annual employment report.

An "Annual Employment Report" (FCC Form 395) shall be filed with the Commission for each cable television system, as defined in § 76.5, on or before May 31 of each year, in accordance with the provisions of § 76.311.

[37 F.R. 6592, Mar. 31, 1972]

Subpart J—Diversification of Control

§ 76.501 Cross-ownership.

(a) No cable television system (including all parties under common control) shall carry the signal of any television broadcast station if such system directly or indirectly owns, operates, controls, or has an interest in:

(1) A national television network (such as ABC, CBS, or NBC); or

(2) A television broadcast station whose predicted Grade B contour, computed in accordance with § 73.684 of this chapter, overlaps in whole or in part the service area of such system (i.e., the area within which the system is serving subscribers); or

(3) A television translator station licensed to the community of such system.

Note 1: The word "control" as used herein is not limited to majority stock ownership, but includes actual working control in whatever manner exercised.

Note 2: The word "interest" as used herein includes, in the case of corporations, common officers or directors, and partial (as well as total) ownership interests represented by ownership of voting stock.

Note 3: In applying the provisions of paragraph (a) of this section to the stockholders of a corporation which has more than 50 stockholders:

(a) Only those stockholders need be considered who are officers or directors or who directly or indirectly own 1 percent or more of the outstanding voting stock.

(b) Stock ownership by an investment company as defined in 15 U.S.C. section 80a–3 (commonly called a mutual fund) need be considered only if it directly or indirectly owns 3 percent or more of the outstanding voting stock or if officers or directors of the corporation are representatives of the investment company. Holdings by investment companies under common management shall be aggregated. If an investment company directly or indirectly owns voting stock in an intermediate company which in turn directly or indirectly owns 50 percent or more of the voting stock of the corporation, the investment company shall be considered to own the same percentage of outstanding shares of such corporation as it owns of the intermediate company: *Provided, however,* That the holding of the investment company need not be considered where the intermediate company owns less than 50 percent of the voting stock, but officers or directors of the corporation who are representatives of the intermediate company shall be deemed to be representatives of the investment company.

(c) In cases where record and beneficial ownership of voting stock is not identical (e.g., bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street name for the benefit of customers, trusts holding stock as record owners for the benefit of designated parties), the party having the right to determine how the stock will be voted will be considered to own it for the purposes of this section.

(b) The provisions of paragraph (a) of this section are not effective until August 10, 1973, as to ownership interests proscribed herein if such interests were in existence on or before July 1, 1970 (e.g., if a franchise were in existence on or before July 1, 1970): *Provided, however,* That the provisions of paragraph (a) of this section are effective on August 10, 1970, as to such interests acquired after July 1, 1970.

Subpart K—Technical Standards

§ 76.601 Performance tests.

(a) The operator of each cable television system shall be responsible for insuring that each such system is designed, installed, and operated in a manner that fully complies with the provisions of this subpart. Each system operator shall be prepared to show, on request by an authorized representative of the Commission, that the system does, in fact, comply with the rules.

(b) The operator of each cable television system shall maintain at its local office a current listing of the cable television channels which that system delivers to its subscribers and the station or stations whose signals are delivered on each Class I cable television channel, and shall specify for each subscriber the minimum visual signal level it maintains on each Class I cable television channel under normal operating conditions.

(c) The operator of each cable television system shall conduct complete performance tests of that system at least once each calendar year (at intervals not to exceed 14 months) and shall maintain the resulting test data on file at the system's local office for at least five (5) years. It shall be made available for inspection by the Commission on request. The performance tests shall be directed at determining the extent to which the system complies with all the technical standards set forth in § 76.605. The tests shall be made on each Class I cable television channel specified pursuant to paragraph (b) of this section, and shall include measurements made at no less than three widely separated points in the system, at least one of which is representative of terminals most distant from the system input in terms of cable distance. The measurements may be taken at convenient monitoring points in the cable network: *Provided*, That data shall be included to relate the measured performance to the system performance as would be viewed from a nearby subscriber terminal. A description of intruments and procedure and a statement of the qualifications of the person performing the tests shall be included.

(d) Successful completion of the performance tests required by paragraph (c) of this section does not relieve the system of the obligation to comply with all pertinent technical standards at all subscriber terminals. Additional tests, repeat tests, or tests involving specified subscriber terminals may be required by the Commission in order to secure compliance with the technical standards.

(e) All of the provisions of this section shall become effective March 31, 1972.

§ 76.605 Technical standards.

(a) The following requirements apply to the performance of a cable television system as measured at any subscriber terminal with a matched termination, and to each of the Class I cable television channels in the system:

(1) The frequency boundaries of cable television channels delivered to subscriber terminals shall conform to those set forth in § 73.603(a) of this chapter: *Provided, however*, That on special application including an adequate showing of public interest, other channel arrangements may be approved.

(2) The frequency of the visual carrier shall be maintained 1.25 MHz±25 kHz above the lower boundary of the cable television channel, except that, in those systems that supply subscribers with a converter in order to facilitate delivery of cable television channels, the frequency of the visual carrier at the output of each such converter shall be maintained 1.25 MHz±250 kHz above the lower frequency boundary of the cable television channel.

(3) The frequency of the aural carrier shall be 4.5 MHz±1 kHz above the frequency of the visual carrier.

(4) The visual signal level, across a terminating impedance which correctly matches the internal impedance of the cable system as viewed from the subscriber terminals, shall be not less than the following appropriate value:

Internal impedance:
  75 ohms.
  300 ohms.
Visual signal level:
  1 millivolt.
  2 millivolts.

(At other impedance values, the minimum visual signal level shall be $\sqrt{0.0133\,Z}$ millivolts, where Z is the appropriate impedance value.)

(5) The visual signal level on each channel shall not vary more than 12 decibels within any 24-hour period, and shall be maintained within:

(i) 3 decibels of the visual signal level of any visual carrier within 6 MHz nominal frequency separation, and

(ii) 12 decibels of the visual signal level on any other channel, and

(iii) A maximum level such that signal degradation due to overload in the subscriber's receiver does not occur.

(6) The rms voltage of the aural signal shall be maintained between 13 and 17 decibels below the associated visual signal level.

(7) The peak-to-peak variation in visual signal level caused by undesired low frequency disturbances (hum or repetitive transients) generated within the system, or by inadequate low frequency response, shall not exceed 5 percent of the visual signal level.

(8) The channel frequency response shall be within a range of ±2 decibels for all frequencies within −1 MHz and +4 MHz of the visual carrier frequency.

(9) The ratio of visual signal level to system noise, and of visual signal level to any undesired cochannel television signal operating on proper offset assignment, shall be not less than 36 decibels.

This requirement is applicable to:

(i) Each signal which is delivered by a cable television system to subscribers within the predicted Grade B contour for that signal, or

(ii) Each signal which is first picked up within its predicted Grade B contour.

(10) The ratio of visual signal level to the rms amplitude of any coherent disturbances such as intermodulation products or discrete-frequency interfering signals not operating on proper offset assignments shall not be less than 46 decibels.

(11) The terminal isolation provided each subscriber shall be not less than 18 decibels, but in any event, shall be sufficient to prevent reflections caused by open-circuited or short-circuited subscriber terminals from producing visible picture impairments at any other subscriber terminal.

(12) As an exception to the general provision requiring measurements to be made at subscriber terminals, and without regard to the class of cable television channel involved, radiation from a cable television system shall be measured in accordance with procedures outlined in § 76.609(h), and shall be limited as follows:

Frequencies	Radiation limit (microvolts/meter)	Distance (feet)
Up to and including 54 MHz	15	100
Over 54 up to and including 216 MHz.	20	10
Over 216 MHz	15	100

(b) Cable television systems distributing signals by using multiple cable techniques or specialized receiving devices, and which, because of their basic design, cannot comply with one or more of the technical standards set forth in paragraph (a) of this section, may be permitted to operate provided that an adequate showing is made which establishes that the public interest is benefited. In such instances the Commission may prescribe special technical requirements to ensure that subscribers to such systems are provided with a good quality of service.

(c) Paragraph (a)(12) of this section shall become effective March 31, 1972. All other provisions of this section shall become effective in accordance with the following schedule:

	Effective date
Cable television systems in operation prior to March 31, 1972	Mar. 31, 1977
Cable television systems commencing operations on or after March 31, 1972	Mar. 31, 1972

[37 F.R. 3278, Feb. 12, 1972, as amended at 37 F.R. 13867, July 14, 1972]

§ 76.609 Measurements.

(a) Measurements made to demonstrate conformity with the performance requirements set forth in §§ 76.601 and 76.605 shall be made under conditions which reflect system performance during normal operations, including the effect of any microwave relay operated in the Cable Television Relay (CAR) Service intervening between pickup antenna and the cable distribution network. Amplifiers shall be operated at normal gains, either by the insertion of appropriate signals or by manual adjustment. Special signals inserted in a cable television channel for measurement purposes should be operated at levels approximating those used for normal operation. Pilot tones, auxiliary or substitute signals, and nontelevision signals normally carried on the cable television system should be operated at normal levels to the extent possible. Some exemplary, but not mandatory, measurement procedures are set forth in this section.

(b) When it may be necessary to remove the television signal normally carried on a cable television channel in order to facilitate a performance measurement, it will be permissible to disconnect the antenna which serves the channel under measurement and to substitute therefor a matching resistance termination. Other antennas and inputs should remain connected and normal signal levels should be maintained on other channels.

(c) As may be necessary to ensure satisfactory service to a subscriber, the Commission may require additional tests to demonstrate system performance or may specify the use of different test procedures.

(d) The frequency response of a cable television channel may be determined by one of the following methods, as appropriate:

(1) By using a swept frequency or a manually variable signal generator at

the sending end and a calibrated attenuator and frequency-selective voltmeter at the subscriber terminal; or

(2) By using a multiburst generator and modulator at the sending end and a demodulator and oscilloscope display at the subscriber terminal.

(e) System noise may be measured using a frequency-selective voltmeter (field strength meter) which has been suitably calibrated to indicate rms noise or average power level and which has a known bandwidth. With the system operating at normal level and with a properly matched resistive termination substituted for the antenna, noise power indications at the subscriber terminal are taken in successive increments of frequency equal to the bandwidth of the frequency-selective voltmeter, summing the power indications to obtain the total noise power present over a 4 MHz band centered within the cable television channel. If it is established that the noise level is constant within this bandwidth, a single measurement may be taken which is corrected by an appropriate factor representing the ratio of 4 MHz to the noise bandwidth of the frequency-selective voltmeter. If an amplifier is inserted between the frequency-selective voltmeter and the subscriber terminal in order to facilitate this measurement, it should have a bandwidth of at least 4 MHz and appropriate corrections must be made to account for its gain and noise figure. Alternatively, measurements made in accordance with the NCTA standard on noise measurement (NCTA Standard 005–0669) may be employed.

(f) The amplitude of discrete frequency interfering signals within a cable television channel may be determined with either a spectrum analyzer or with a frequency-selective voltmeter (field strength meter), which instruments have been calibrated for adequate accuracy. If calibration accuracy is in doubt, measurements may be referenced to a calibrated signal generator, or a calibrated variable attenuator, substituted at the point of measurement. If an amplifier is used between the subscriber terminal and the measuring instrument, appropriate corrections must be made to account for its gain.

(g) The terminal isolation between any two terminals in the system may be measured by applying a signal of known amplitude to one and measuring the amplitude of that signal at the other terminal. The frequency of the signal should be close to the midfrequency of the channel being tested.

(h) Measurements to determine the field strength of radio frequency energy radiated by cable television systems shall be made in accordance with standard engineering procedures. Measurements made on frequencies above 25 MHz shall include the following:

(1) A field strength meter of adequate accuracy using a horizontal dipole antenna shall be employed.

(2) Field strength shall be expressed in terms of the rms value of synchronizing peak for each cable television channel for which radiation can be measured.

(3) The dipole antenna shall be placed 10 feet above the ground and positioned directly below the system components. Where such placement results in a separation of less than 10 feet between the center of the dipole antenna and the system components, the dipole shall be repositioned to provide a separation of 10 feet.

(4) The horizontal dipole antenna shall be rotated about a vertical axis and the maximum meter reading shall be used.

(5) Measurements shall be made where other conductors are 10 or more feet away from the measuring antenna.

[37 F.R. 3278, Feb. 12, 1972; 37 F.R. 13867, July 14, 1972]

§ 76.613 Interference from a cable television system.

In the event that the operation of a cable television system causes harmful interference to reception of authorized radio stations, the operation of the system shall immediately take whatever steps are necessary to remedy the interference.

§ 76.617 Responsibility for receiver-generated interference.

Interference generated by a radio or television receiver shall be the responsibility of the receiver operator in accordance with the provisions of Part 15, Subpart C, of this chapter: *Provided, however,* That the operator of a cable television system to which the receiver is connected shall be responsible for the suppression of receiver-generated interference that is distributed by the system when the interfering signals are introduced into the system at the receiver.

APPENDIX B—SIGNIFICANTLY VIEWED TELEVISION STATIONS

This table lists the television stations significantly viewed for purposes of cable television carriage, in accordance with § 76.54(a) of the Commission's rules. All stations meeting the significant viewing test are listed, including market and other stations that might be subject to required or permissible carriage under other provisions of the rules.

Cities, not politically part of any county, are listed with the county in which they were included for survey purposes. A description of how split counties have been divided is included after each State listing that includes split counties. The description indicates which Census County Divisions (1960) are included in each division of the county. Maps of Census County Divisions may be found in U.S. Census of Population: 1960, Vol. 1, Characteristics of the Population, Part A, Number of Inhabitants.

A plus sign (+) following the station call letters indicates that the viewing is due to either the parent station or a satellite. In this situation either the parent or the satellite station may be carried.

Information in the table is derived from 1971 American Research Bureau surveys. See memorandum opinion and order on reconsideration of the Cable Television Report and Order, FCC 72-530. In counties marked by an asterisk, individual survey may be submitted under § 76.54(b) of the rules prior to March 31, 1973. No stations are listed for those counties which had over 90 percent cable television penetration. For counties in which less than 5 non-CATV diaries were tabulated, no stations are listed (shown as NA) if the results showed significant signals from more than one market.

SIGNIFICANTLY VIEWED SIGNALS

County	Call letters, channel number, and market name		
ALABAMA			
Autauga	WSFA	12	Montgomery.
	WCOV	20	Do.
	WKAB	32	Do.
Baldwin	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Barbour	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
	WSFA	12	Montgomery.
Bibb	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
Blount	WBRC	6	Do.
	WAPI	13	Do.
	WHNT	19	Huntsville-Decatur-Florence.
Bullock	WSFA	12	Montgomery.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Butler *	WSFA	12	Montgomery.
Calhoun	WBRC	6	Birmingham.
	WAPI	13	Do.
	WHMA	40	Anniston, Ala.
ALABAMA—continued			
Chambers *	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Cherokee	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WBRC	6	Birmingham.
Chilton	WBRC	6	Do.
	WAPI	13	Do.
	WBMG	42	Do.
	WSFA	12	Montgomery.
Choctaw	WTOK	11	Meridian.
Clarke	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Clay	WBRC	6	Birmingham.
	WAPI	13	Do.
	WRBL	3	Columbus, Ga.
Cleburne	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WBRC	6	Birmingham.
	WAPI	13	Do.
Coffee*	WTVY	4	Dothan.
	WSEA	12	Montgomery.
Colbert	WOWL	15	Huntsville-Decatur-Florence.
	WHNT	19	Do.
	WAAY	31	Do.
	WMSL	48	Do.
Conecuh	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
	WSFA	12	Montgomery.
Coosa	WBRC	6	Birmingham.
	WAPI	13	Do.
	WSFA	12	Montgomery.
Covington	WSFA	12	Do.
	WTVY	4	Dothan.
Crenshaw	WSFA	12	Montgomery.
	WCOV	20	Do.
	WTVY	4	Dothan.
Cullman	WBRC	6	Birmingham.
	WAPI	13	Do.
	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
Dale	WTVY	4	Dothan.
	WTVM	9	Columbus, Ga.
	WRBL	3	Do.
	WSFA	12	Montgomery.
Dallas	WSFA	12	Do.
	WCOV	20	Do.
	WKAB	32	Do.
	WBRC	6	Birmingham.
De Kalb*	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Elmore	WSFA	12	Montgomery.
	WCOV	20	Do.
	WKAB	32	Do.
Escambia	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Etowah	WBRC	6	Birmingham.
	WAPI	13	Do.
	WHMA	40	Anniston, Ala.
Fayette	WBRC	6	Birmingham.
	WAPI	13	Do.
	WCBI	4	Columbus, Miss.
Franklin	WHNT	19	Huntsville-Decatur-Florence.
	WBRC	6	Birmingham.
	WCBI	4	Columbus, Miss.
	WTWV	9	Tupelo.
Geneva	WTVY	4	Dothan.
	WDHN	18	Do.
	WJHG	7	Panama City.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ALABAMA—continued			
Greene	WBRC	6	Birmingham.
	WAPI	13	Do.
	WTOK	11	Meridian.
	WCFT	33	Tuscaloosa.
Hale	WBRC	6	Birmingham.
	WAPI	13	Do.
	WTOK	11	Meridian.
	WCFT	33	Tuscaloosa.
Henry	WTVY	4	Dothan.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Houston	WTVY	4	Dothan.
	WDHN	18	Do.
	WJHG	7	Panama City.
Jackson	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Jefferson	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
Lamar *	WCBI	4	Columbus, Miss.
	WBRC	6	Birmingham.
	WAPI	13	Do.
Lauderdale	WOWL	15	Huntsville-Decatur-Florence.
	WHNT	19	Do.
	WAAY	31	Do.
	WMSL	48	Do.
Lawrence	WHNT	19	Do.
	WAAY	31	Do.
	WMSL	48	Do.
	WBRC	6	Birmingham.
Lee	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSFA	12	Montgomery.
Limestone	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
Lowndes	WSFA	12	Montgomery.
	WCOV	20	Do.
	WKAB	32	Do.
Macon	WSFA	12	Do.
	WCOV	20	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Madison	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
Marengo	WTOK	11	Meridian.
Marion	WBRC	6	Birmingham.
	WAPI	13	Do.
	WCBI	4	Columbus, Miss.
Marshall	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
	WBRC	6	Birmingham.
	WAPI	13	Do.
Mobile	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Monroe	WEAR	3	Do.
	WRRG	5	Do.
	WALA	10	Do.
Montgomery	WSFA	12	Montgomery.
	WCOV	20	Do.
	WKAB	32	Do.
Morgan	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
	WBRC	6	Birmingham.
Perry	WBRC	6	Do.
	WAPI	13	Do.
	WSFA	12	Montgomery.
Pickens	WBRC	6	Birmingham.
	WAPI	13	Do.
	WCBI	4	Columbus, Miss.
Pike	WSFA	12	Montgomery.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
Randolph	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Russell	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WYEA	38	Do.
St. Clair	WBRC	6	Birmingham.
	WAPI	13	Do.
Shelby	WBRC	6	Do.
	WAPI	13	Do.
	WBMG	42	Do.
Sumter	WTOK	11	Meridian.
Talladega	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
Tallapoosa	WBRC	6	Do.
	WAPI	13	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSFA	12	Montgomery.
Tuscaloosa	WBRC	6	Birmingham.
	WAPI	13	Do.
	WCFT	33	Tuscaloosa.
Walker	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
Washington	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Wilcox	WSFA	12	Montgomery.
	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
Winston	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
	WHNT	19	Huntsville-Decatur-Florence.
ARIZONA			
Apache	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Cochise	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
Coconino	KOAI	2	Phoenix.
	KTVK	3	Do.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Gila	KTVK	3	Do.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Graham	KTAR	12	Do.
	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
Greenlee	KVOA	4	Do.
	KGUN	9	Do.
	KOLD	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

ARIZONA—continued

County	*Call letters, channel number, and market name*		
Maricopa	KTVK	3	Phoenix.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Mohave	KTVK	3	Do.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
	KORK	3	Las Vegas.
Navajo	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
	KOAI	2	Phoenix.
	KOOL	10	Do.
Pima East	KVOA	4	Tucson.
	KGUN	9	Do.
	KZAZ	11	Do.
	KOLD	13	Do.
Pima West	KVOA	4	Do.
	KGUN	9	Do.
	KOLD	13	Do.
	KPHO	5	Phoenix.
Pinal	KTVK	3	Do.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
	KVOA	4	Tucson.
Santa Cruz	KVOA	4	Do.
	KGUN	9	Do.
	KZAZ	11	Do.
	KOLD	13	Do.
	KPHO	5	Phoenix.
	XHFA	2	Mexico.
Yavapai	KTVK	3	Phoenix.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Yuma	KPHO	5	Do.
	KBLU	13	Yuma.
	KECC	9	El Centro.

Census County Divisions in Split Counties

Pima West: Ajo, Papago.
Pima East: All other.

ARKANSAS

County	*Call letters, channel number, and market name*		
Arkansas	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Ashley*	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Baxter	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Benton	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
	KFSA	5	Fort Smith.
	KOTV	6	Tulsa.
	KTUL	8	Do.
Boone	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
Bradley	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
	KTVE	10	Monroe-El Dorado.
Calhoun	KARK	4	Little Rock.
	KATV	7	Do.
	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Carroll	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
Chicot*	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	WABC	6	Greenwood-Greenville.
Clark	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Clay	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KAIT	8	Jonesboro.
Cleburne	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Cleveland	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Columbia	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Conway	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Craighead	KAIT	8	Jonesboro.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Crawford*	KFSA	5	Fort Smith.
	KTUL	8	Tulsa.
Crittenden	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Cross	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Dallas	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Desha	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
	KTVE	10	Monroe-El Dorado.
Drew	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
	KTVE	10	Monroe-El Dorado.
Faulkner	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Franklin*	KFSA	5	Fort Smith.
	KARK	4	Little Rock.
	KTHV	11	Do.
Fulton*	KYTV	3	Springfield, Mo.
	KAIT	8	Jonesboro.
Grant	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Garland	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Greene	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KAIT	8	Jonesboro.
Hempstead	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Hot Spring	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Howard	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
Independence	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Izard	KARK	4	Do.
	KTHV	11	Do.
	KYTV	3	Springfield, Mo.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ARKANSAS—continued			
Jackson	KARK	4	Little Rock.
	KTHV	11	Do.
	KAIT	8	Jonesboro.
	WREC	3	Memphis.
	WMC	5	Do.
Jefferson	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Johnson	KARK	4	Do.
	KTHV	11	Do.
	KFSA	5	Fort Smith.
	KATV	7	Little Rock.
Lafayette	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Lawrence	KAIT	8	Jonesboro.
	WREC	3	Memphis.
	WMC	5	Do.
Lee	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
	KATV	7	Little Rock.
Lincoln	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Little River	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Logan	KFSA	5	Fort Smith.
	KARK	4	Little Rock.
	KTHV	11	Do.
Lonoke	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Madison*	KYTV	3	Springfield, Mo.
	KFSA	5	Fort Smith.
Marion	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
	KARK	4	Little Rock.
	KTHV	11	Do.
Miller	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Mississippi	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Monroe	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Montgomery	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Nevada	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Newton	KYTV	3	Springfield, Mo.
	KARK	4	Little Rock.
	KTHV	11	Do.
Ouachita	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
	KTVE	10	Monroe-El Dorado.
Perry	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Phillips	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KATV	7	Little Rock.
Pike	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
Poinsett	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KAIT	8	Jonesboro.
Polk	KARK	4	Little Rock.
	KTHV	11	Do.
	KFSA	5	Fort Smith.
	KTAL	6	Shreveport-Texarkana.
	KATV	7	Little Rock.
Pope	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Prairie	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Pulaski	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Randolph	KAIT	8	Jonesboro.
	WREC	3	Memphis.
	WMC	5	Do.
St. Francis	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
	KATV	7	Little Rock.
Saline	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Scott	KFSA	5	Fort Smith.
	KARK	4	Little Rock.
	KTUL	8	Tulsa.
Searcy	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
	KYTV	3	Springfield, Mo.
Sebastian	KFSA	5	Fort Smith.
	KTUL	8	Tulsa.
Sevier	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Sharp*	KAIT	8	Jonesboro.
	KARK	4	Little Rock.
	WMC	5	Memphis.
Stone	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Union	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	KATV	7	Little Rock.
	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
Van Buren	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Washington	KOTV	6	Tulsa.
	KTUL	8	Do.
	KFSA	5	Fort Smith.
	KODE	12	Joplin-Pittsburg.
White	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Woodruff	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Yell	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
	KFSA	5	Fort Smith.
CALIFORNIA			
Alameda East	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KGSC	36	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

CALIFORNIA—continued

County	Call letters, channel number, and market name		
Alameda West	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.
Alpine	KTVN	2	Reno.
	KCRL	4	Do.
	KOLO	8	Do.
Amador	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
Butte	KRCR	7	Chico-Redding.
	KHSL	12	Do.
	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
Calaveras	KCRA	3	Do.
	KXTV	10	Do.
	KOVR	13	Do.
Colusa	KCRA	3	Do.
	KXTV	10	Do.
	KOVR	13	Do.
	KRCR	7	Chico-Redding.
	KHSL	12	Do.
Contra Costa East.	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
	KTVU	2	San Francisco.
	KPIX	5	Do.
Contra Costa West.	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.
Del Norte	KIEM	3	Eureka.
	KVIQ	6	Do.
El Dorado East over 90 percent cable penetration.			
El Dorado West	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
Fresno	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
Glenn	KRCR	7	Chico-Redding.
	KHSL	12	Do.
Humboldt	KIEM	3	Eureka.
	KVIQ	6	Do.
Imperial	KECC	9	El Centro.
	KCOP	13	Los Angeles.
	KBLU	13	Yuma.
	XHBC	3	Mexico.
Inyo	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KOLO	8	Reno.
Kern East	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Kern West	KJTV	17	Bakersfield.
	KERO	23	Do.
	KBAK	29	Do.
Kings	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
	KERO	23	Bakersfield.
	KBAK	29	Do.
Lake	KCRA	3	Sacramento-Stockton.
	KOVR	13	Do.
	KTVU	2	San Francisco.
Lassen	KTVN	2	Reno.
	KCRL	4	Do.
	KOLO	8	Do.
Los Angeles	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Madera	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
Marin	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Mariposa	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
	KOVR	13	Sacramento-Stockton.
Mendocino	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KIEM	3	Eureka.
Merced	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
Modoc	KRCR	7	Chico-Redding.
	KOTI	2	Klamath Falls.
	KMED	10	Medford.
	KOLO	8	Reno.
Mono	KOLO	8	Do.
	KCRA	3	Sacramento-Stockton.
	KPIX	5	San Francisco.
	KGO	7	Do.
	KTVU	2	Do.
Monterey East	KSBW	8	Salinas-Monterey.
	KNTV	11	Do.
	KMST	46	Do.
	KTVU	2	San Francisco.
Monterey West	KSBW	8	Salinas-Monterey.
	KNTV	11	Do.
	KMST	46	Do.
	KTVU	2	San Francisco.
Napa North	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Napa South	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
Nevada East	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KOLO	8	Reno.
	KTVU	2	San Francisco.
Nevada West	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
Orange North	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
CALIFORNIA—continued			
Orange South	KNXT	2	Los Angeles
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Placer East	KOLO	8	Reno.
Placer West	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
Plumas	KCRA	3	Do.
	KTXL	40	Do.
	KHSL	12	Chico-Redding.
Riverside East	KTVK	3	Phoenix.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Riverside West	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Riverside Central.	KNXT	2	Do.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Sacramento	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
San Benito	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KSBW	8	Salinas-Monterey.
	KNTV	11	Do.
San Bernardino East.	KTVK	3	Phoenix.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
San Bernardino West.	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
San Diego	XETV	6	San Diego.
	KFBM	8	Do.
	KOGO	10	Do.
	KCST	39	Do.
	KCOP	13	Los Angeles.
	KNBC	4	Do.
San Francisco	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
San Joaquin	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
San Luis Obispo	KSBY	6	Salinas-Monterey.
	KEYT	3	Santa Barbara-Santa Maria.
	KCOY	12	Do.
San Mateo	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.
Santa Barbara North.	KEYT	3	Santa Barbara-Santa Maria.
	KCOY	12	Do.
	KSBY	6	Salinas-Monterey.
Santa Barbara South.	KEYT	3	Santa Barbara-Santa Maria.
	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Santa Clara East.*	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.
	KSBW	8	Salinas-Monterey.
	KNTV	11	Do.
Santa Clara West	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.
	KNTV	11	Salinas-Monterey.
Santa Cruz	KSBW	8	Do.
	KNTV	11	Do.
	KMST	46	Do.
	KTVU	2	San Francisco.
Shasta	KRCR	7	Chico-Redding
	KHSL	12	Do.
Sierra	KCRL	4	Reno.
	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KTVU	2	San Francisco.
	KRON	4	Do.
Siskiyou	KRCR	7	Chico-Redding.
	KHSL	12	Do.
	KMED	10	Medford.
Solano East	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
	KTVU	2	San Francisco.
	KPIX	5	Do.
	KGO	7	Do.
	KRON	4	Do.
Solano West	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Sonoma North	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Sonoma South	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Stanislaus	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
Sutter*	KCRA	3	Do.
	KXTV	10	Do.
	KOVR	13	Do.
	KHSL	12	Chico-Redding.
	KTVU	2	San Francisco.
Tehama	KRCR	7	Chico-Redding.
	KHSL	12	Do.
Trinity	KRCR	7	Do.
	KHSL	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	CALIFORNIA—continued		
Tulare	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
	KJTV	17	Bakersfield.
	KERO	23	Do.
	KBAK	29	Do.
Tuolumne	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KSBW	8	Salinas-Monterey.
	KTVU	2	San Francisco.
	KRON	4	Do.
Ventura	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Yolo	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
Yuba	KCRA	3	Do.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
	KHSL	12	Chico-Redding.

Census county divisions in split counties

Alameda East: Livermore, Pleasanton.
Alameda West: All other.
Contra Costa East: Ambrose, Antioch, Brentwood-Bryon, Clayton-Tassajara, Martinez, Oakley-Bethel, Pittsburg, Pleasant Hill, Port Chicago.
Contra Costa West: All other.
El Dorado East: Lake Valley.
El Dorado West: All other.
Kern East: East Kern, Tehachapi.
Kern West: All other.
Monterey West: Carmel, Carmel Valley, Ford Ord, Monterey, Monterey Penin., Pacific Grove, Seaside.
Monterey East: All other.
Napa North: Angwin, Berryessa, Calistoga, St. Helena.
Napa South: All other.
Nevada East: Donner.
Nevada West: All other.
Orange North: Anaheim-Garden Grove, Buena Park. Cypress, Fullerton-La Habra, Santa Ana Canyon, Santa Ana-Orange.
Orange South: All other.
Placer East: Lake Tahoe.
Placer West: All other.
Riverside East: Palo Verde.
Riverside Central: Cathedral City-Palm Desert, Chuckwalla, Coachella Valley, Desert Hot Springs, Idyllwild, Palm Springs, San Gorgonio Pass.
Riverside West: All other.
San Bernardino East: Needles.
San Bernardino West: All other.
Santa Barbara North: Cuyama, Guadalupe, Lompoc Valley, Santa Maria, Santa Maria Valley, Santa Ynez Valley.
Santa Barbara South: All other.
Santa Clara East: Diablo Range, Gilroy, Llagas-Uvas, Morgan Hill, San Martin.
Santa Clara West: All other.
Solano East: Dixon, Fairfield-Suisun, Rio Vista, Vacaville.
Solano West: All other.
Sonoma South: Petaluma, Petaluma Rural, Sonoma.
Sonoma North: All other.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	COLORADO		
Adams	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Alamosa	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
	KRDO	13	Colorado Springs-Pueblo.
Arapahoe	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Archuleta	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Baca	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Bent	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
Boulder	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Chaffee	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KOAA	5	Colorado Springs-Pueblo.
Cheyenne	KAYS+	7	Wichita-Hutchinson.
	KKTV	11	Colorado Springs-Pueblo.
	KRDO	13	Do.
Clear Creek	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Conejos	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Costilla	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Crowley	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Custer	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
Delta	KREX	5	Grand Junction.
	KREY	10	Do.
	KBTV	9	Denver.
Denver	KWGN	2	Do.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Dolores	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Douglas	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KRDO	13	Colorado Springs-Pueblo.
Eagle	KOA	4	Denver.
	KLZ	7	Do.
	KBTV	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
COLORADO—continued			
Elbert	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KKTV	11	Colorado Springs-Pueblo.
	KRDO	13	Do.
El Paso	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
Fremont	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
Garfield	KREX	5	Grand Junction.
	KOA	4	Denver.
Gilpin	KWGN	2	Do.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Grand	KWGN	2	Do.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Gunnison	KOAA	5	Colorado Springs-Pueblo.
	KBTV	9	Denver.
	KREX	5	Grand Junction.
	KREY	10	Do.
Hinsdale	KREX	5	Do.
	KOAA	5	Colorado Springs-Pueblo.
Huerfano	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
Jackson	KOA	4	Denver.
	KFBC	5	Cheyenne.
Jefferson	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Kiowa	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
	KAYS+	7	Wichita-Hutchinson.
Kit Carson	KAYS+	7	Do.
Lake	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
La Plata	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
	KREZ	6	Grand Junction.
Larimer	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KFBC	5	Cheyenne.
Las Animas	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Lincoln	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
	KWGN	2	Denver.
	KOA	4	Do.
Logan	KTVS	3	Cheyenne.
Mesa	KREX	5	Grand Junction.
Mineral	KOAA	5	Colorado Springs-Pueblo.
	KOAT	7	Albuquerque.
	KGGM	13	Do.
Moffat	KOA	4	Denver.
	KLZ	7	Do.
	KBTV	9	Do.
Montezuma	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Montrose	KREY	10	Grand Junction.
	KOAA	5	Colorado Springs-Pueblo.
	KBTV	9	Denver.
	KUTV	2	Salt Lake City.
Morgan	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KTVS	3	Cheyenne.
Otero	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Ouray	KREX	5	Grand Juntion.
Park	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Phillips	KTVS	3	Cheyenne.
	KHOL+	13	Lincoln-Hastings-Kearney.
Pitkin*	NA		
Prowers	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
	KGLD	11	Wichita-Hutchinson.
Pueblo	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Rio Blanco	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Rio Grande*	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Routt	KOA	4	Denver.
	KLZ	7	Do.
	KBTV	9	Do.
Saguache	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
	KOAA	5	Colorado Springs-Pueblo.
San Juan	KREX	5	Grand Junction.
San Miguel	KREX	5	Do.
Sedgwick	KTVS	3	Cheyenne.
	KHOL+	13	Lincoln-Hastings-Kearney.
	KNOP	2	North Platte.
Summit	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Teller	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KKTV	11	Colorado Springs-Pueblo.
	KRDO	13	Do.
Washington	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KTVS	3	Cheyenne.
Weld	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Yuma	KAYS +	7	Wichita-Hutchinson.
	KOMC	8	Do.
	KTVS	3	Cheyenne.
	KHOL +	13	Lincoln-Hastings-Kearney.

SIGNIFICANTLY VIEWED SIGNALS—Continued

CONNECTICUT

County	Call letters, channel number, and market name		
Fairfield	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WNHC	8	Hartford-New Haven.
Hartford	WTIC	3	Do.
	WNHC	8	Do.
	WHCT	18	Do.
	WHNB	30	Do.
Litchfield	WTIC	3	Do.
	WNHC	8	Do.
	WHNB	30	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WPIX	11	Do.
Middlesex	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
	WHNB	30	Do.
	WNEW	5	New York.
New Haven	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
New London	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WHDH	5	Boston.
	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
Tolland	WTIC	3	Do.
	WNHC	8	Do.
	WHNB	30	Do.
	WBZ	4	Boston.
	WHYN	40	Springfield, Mass.
Windham	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.

DELAWARE

County	Call letters, channel number, and market name		
Kent	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
New Castle	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Sussex	WBOC	16	Salisbury.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.

SIGNIFICANTLY VIEWED SIGNALS—Continued

DISTRICT OF COLUMBIA

County	Call letters, channel number, and market name		
District of Columbia.	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.

FLORIDA

County	Call letters, channel number, and market name		
Alachua	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WESH	2	Orlando-Daytona Beach.
Baker	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Bay	WJHG	7	Panama City.
	WTVY	4	Dothan.
Bradford	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Brevard	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Broward	WTVJ	4	Miami.
	WCKT	7	Do.
	WPLG	10	Do.
	WAJA	23	Do.
	WPTV	5	West Palm Beach.
	WEAT	12	Do.
Calhoun	WJHG	7	Panama City.
	WTVY	4	Dothan.
	WCTV	6	Tallahassee.
Charlotte	WFLA	8	Tampa-St. Petersburg.
	WTVT	13	Do.
	WINK	11	Fort Myers.
Citrus	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Clay	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Collier*	90 percent cable penetration.		
Columbia	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Dade	WTVJ	4	Miami.
	WCIX	6	Do.
	WCKT	7	Do.
	WPLG	10	Do.
	WAJA	23	Do.
De Soto	WFLA	8	Tampa-St. Petersburg.
	WTVT	13	Do.
	WTOG	44	Do.
	WINK	11	Fort Myers.
Dixie	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WESH	2	Orlando-Daytona Beach.
	WCTV	6	Tallahassee.
	WLCY	10	Tampa-St. Petersburg.
Duval	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Escambia	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Flagler	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
	WJXT	4	Jacksonville, Fla.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	FLORIDA—continued		
Franklin	WCTV	6	Tallahassee.
	WJHG	7	Panama City.
Gadsden	WCTV	6	Tallahassee.
	WTVY	4	Dothan.
	WJHG	7	Panama City.
Gilchrist	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WESH	2	Orlando-Daytona Beach.
Glades	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WINK	11	Fort Myers.
	WTVJ	4	Miami.
Gulf	WJHG	7	Panama City.
	WTVY	4	Dothan.
	WCTV	6	Tallahassee.
Hamilton *	WJXT	4	Jacksonville, Fla.
	WCTV	6	Tallahassee.
Hardee	WFLA	8	Tampa-St. Petersburg.
	WTVT	13	Do.
	WTOG	44	Do.
Hendry *	WINK	11	Fort Myers.
	WBBH	20	Do.
	WTVJ	8	Miami.
	WPTV	5	West Palm Beach.
	WEAT	12	Do.
Hernando	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Highlands	WFLA	8	Do.
	WTVT	13	Do.
	WINK	11	Fort Myers.
Hillsborough	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Holmes	WTVY	4	Dothan.
	WJHG	7	Panama City.
Indiana River	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WTVX	34	Fort Pierce-Vero Beach.
Jackson	WTVY	4	Dothan.
	WJHG	7	Panama City.
	WCTV	6	Tallahassee.
Jefferson	WCTV	6	Do.
	WALB	10	Albany, Ga.
Lafayette	WCTV	6	Tallahassee.
Lake*	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Lee	WINK	11	Fort Myers.
	WBBH	20	Do.
Leon	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
	WJHG	7	Panama City.
Levy*	WESH	2	Orlando-Daytona Beach.
	WJXT	4	Jacksonville, Fla.
	WLCY	10	Tampa-St. Petersburg.
	WTVT	13	Do.
Liberty	WCTV	6	Tallahassee.
	WJHG	7	Panama City.
Madison	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Manatee	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Marion	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Martin	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WTVJ	4	Miami.
Monroe	WTVJ	4	Miami.
	WCIX	6	Do.
	WCKT	7	Do.
	WPLG	10	Do.
Nassau	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Okaloosa	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
	WJHG	7	Panama City.
Okeechobee	WPTV	5	West Palm Beach.
	WEAT	12	Do.
Orange	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Osceola	WESH	2	Do.
	WDBO	6	Do.
	WFTV	9	Do.
Palm Beach	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WTVJ	4	Miami.
	WCKT	7	Do.
	WPLG	10	Do.
Pasco	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Pinellas	WFLA	8	Do.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Polk	WFLA	8	Do.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
	WDBO	6	Orlando-Daytona Beach.
	WFTV	9	Do.
Putnam	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
St. Johns	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
St. Lucie	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WTVX	34	Fort Pierce-Vero Beach.
Santa Rosa	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Sarasota	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Seminole	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Sumter	WESH	2	Do.
	WDBO	6	Do.
	WFTV	9	Do.
	WFLA	8	Tampa-St. Petersburg.
	WTVT	13	Do.
Suwannee	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WCTV	6	Tallahassee.
Taylor	WCTV	6	Do.
Union	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
FLORIDA—continued			
Volusia	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Wakulla	WCTV	6	Tallahassee.
	WJHG	7	Panama City.
Walton	WJHG	7	Do.
	WTVY	4	Dothan.
	WEAR	3	Mobile-Pensacola.
Washington	WTVY	4	Dothan.
	WJHG	7	Panama City.
GEORGIA			
Appling	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
	WJBF	6	Augusta.
	WJXT	4	Jacksonville, Fla.
	WCSC	5	Charleston, S.C.
Atkinson	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Bacon	WALB	10	Albany, Ga.
	WJXT	4	Jacksonville, Fla.
	WSAV	3	Savannah.
Baker	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
	WCTV	6	Tallahassee.
Baldwin	WMAZ	13	Macon.
	WSB	2	Atlanta.
	WAGA	5	Do.
Banks	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
Barrow	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
Bartow	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Ben Hill	WALB	10	Albany, Ga.
	WMAZ	13	Macon.
Berrien	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Bibb	WMAZ	13	Macon.
	WCWB	41	Do.
	WSB	2	Atlanta.
	WTVM	9	Columbus, Ga.
Bleckley	WMAZ	13	Macon.
Brantley	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Brooks	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Bryan	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
Bulloch	WSAV	3	Do.
	WTOC	11	Do.
	WJBF	6	Augusta.
	WRDW	12	Do.
Burke	WJBF	6	Do.
	WRDW	12	Do.
Butts	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
GEORGIA—continued			
Calhoun	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
	WCTV	6	Tallahassee.
Camden	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Candler	WJBF	6	Augusta.
	WRDW	12	Do.
	WSAV	3	Savannah.
	WTOC	11	Do.
Carroll	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Catoosa	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Charlton	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Chatham	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
Chattahoochee	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Chattooga	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Cherokee	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Clarke	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
Clay	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
Clayton	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Clinch	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Cobb	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Coffee	WALB	10	Albany, Ga.
Colquitt	WALB	10	Do.
	WCTV	6	Tallahassee.
Columbia	WJBF	6	Augusta.
	WRDW	12	Do.
	WATU	26	Do.
Cook	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Coweta	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Crawford	WMAZ	13	Macon.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSB	2	Atlanta.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	GEORGIA—continued		
Crisp	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
	WMAZ	13	Macon.
Dade	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Dawson	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Decatur	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
	WTVY	4	Dothan.
De Kalb	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Dodge	WMAZ	13	Macon.
	WALB	10	Albany, Ga.
Dooly	WMAZ	13	Macon.
	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Dougherty	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WCTV	6	Tallahassee.
Douglas	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Early	WTVY	4	Dothan.
	WTVM	9	Columbus, Ga.
	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Echols	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Effingham	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
Elbert	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WJBF	6	Augusta.
Emanuel	WJBF	6	Do.
	WRDW	12	Do.
Evans	WSAV	3	Savannah.
	WTOC	11	Do.
	WJBF	6	Augusta.
Fannin	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WATL	36	Do.
Fayette	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Floyd	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Forsyth	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Franklin	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	GEORGIA—continued		
Fulton	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Gilmer*	WSB	2	Do.
	WAGA	5	Do.
	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Glascock	WJBF	6	Augusta.
	WRDW	12	Do.
Glynn	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Gordon	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
Grady	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Greene	WSB	2	Atlanta.
	WAGA	5	Do.
	WOXI	11	Do.
	WJBF	6	Augusta.
Gwinnett	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Habersham*	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
Hall	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Hancock	WJBF	6	Augusta
	WRDW	12	Do.
	WMAZ	13	Macon.
Haralson	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Harris	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSB	2	Atlanta.
Hart	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Heard	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Henry	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Houston	WMAZ	13	Macon.
	WCWB	41	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Irwin*	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Jackson	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	GEORGIA—continued		
Jasper	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
	WMAZ	13	Macon.
Jeff Davis	WALB	10	Albany, Ga.
	WJXT	4	Jacksonville, Fla.
	WSAV	3	Savannah.
	WTOC	11	Do.
Jefferson	WJBF	6	Augusta.
	WRDW	12	Do.
Jenkins	WJBF	6	Do.
	WRDW	12	Do.
Johnson	WMAZ	13	Macon.
	WJBF	6	Augusta.
	WRDW	12	Do.
Jones	WMAZ	13	Macon.
	WCWB	41	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Lamar	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WMAZ	13	Macon.
Lanier	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Laurens	WMAZ	13	Macon.
	WCWB	41	Do.
Lee	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
Liberty	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
Lincoln	WJBF	6	Augusta.
	WRDW	12	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
Long	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
Lowndes	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Lumpkin	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
McDuffie	WJBF	6	Augusta.
	WRDW	12	Do.
McIntosh	WSAV	3	Savannah.
	WTOC	11	Do.
	WJXT	4	Jacksonville, Fla.
Macon	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
	WMAZ	13	Macon.
Madison	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Marion	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Meriwether	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do..
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Miller	WTVY	4	Dothan.
	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Mitchell	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	GEORGIA—continued		
Monroe	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WMAZ	13	Macon.
Montgomery	WMAZ	13	Do.
	WJBF	6	Augusta.
	WSAV	3	Savannah.
	WTOC	11	Do.
Morgan	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Murray	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
Muscogee	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WYEA	38	Do.
Newton	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Oconee	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
Oglethorpe	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WJBF	6	Augusta.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Paulding	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Peach	WMAZ	13	Macon.
	WCWB	41	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Pickens	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Pierce	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Pike	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Polk	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
Pulaski	WMAZ	13	Macon.
	WRBL	3	Columbus, Ga.
Putnam	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WMAZ	13	Macon.
Quitman	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSFA	12	Montgomery.
Rabun	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Randolph	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
	WTVY	4	Dothan.
Richmond	WJBF	6	Augusta.
	WRDW	12	Do.
	WATU	26	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
GEORGIA—continued			
Rockdale	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Schley	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
Screven	WJBF	6	Augusta.
	WRDW	12	Do.
	WSAV	3	Savannah.
	WTOC	11	Do.
Seminole	WTVY	4	Dothan.
	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Spalding	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Stephens	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Stewart	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Sumter	WRBL	3	Do.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
Talbot	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Taliaferro	WJBF	6	Augusta.
	WRDW	12	Do.
	WAGA	5	Atlanta.
Tattnall	WSAV	3	Savannah.
	WTOC	11	Do.
Taylor	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WMAZ	13	Macon.
Telfair	WALB	10	Albany, Ga.
	WMAZ	13	Macon.
Terrell	WRLB	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
Thomas	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Tift	WALB	10	Do.
	WCTV	6	Tallahassee.
Toombs	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
	WJBF	6	Augusta.
	WRDW	12	Do.
Towns	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WRCB	3	Chattanooga.
Treutlen	WMAZ	13	Macon.
	WJBF	6	Augusta.
	WRDW	12	Do.
Troup	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Turner	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WCTV	6	Tallahassee.
Twiggs	WMAZ	13	Macon.
	WCWB	41	Do.
Union	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WRCB	3	Chattanooga.
Upson	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WMAZ	13	Macon.
Walker	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Walton	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Ware	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Warren	WJBF	6	Augusta.
	WRDW	12	Do.
	WATU	26	Do.
Washington	WJBF	6	Do.
	WRDW	12	Do.
	WMAZ	13	Macon.
Wayne	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
	WJXT	4	Jacksonville, Fla.
Webster	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Wheeler	WMAZ	13	Macon.
	WJBF	6	Augusta.
White	WSB	2	Atlanta.
	WAGA	5	Do.
	WOXI	11	Do.
Whitfield	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
Wilcox	WMAZ	13	Macon.
	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga
	WTVM	9	Do.
Wilkes	WJBF	6	Augusta.
	WRDW	12	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
Wilkinson	WMAZ	13	Macon.
	WCWB	41	Do.
Worth	WALB	10	Albany, Ga.
	WTVM	9	Columbus, Ga.
	WCTV	6	Tallahassee.
	WRBL	3	Columbus.
HAWAII			
Hawaii 1	KHON+	2	Honolulu.
	KHVH+	4	Do.
	KGMB+	9	Do.
Hawaii 2	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.
Hawaii 3	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.
Hawaii 4	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.
Hawaii 5	KHVH+	4	Fo.
Honolulu 1	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.
Honolulu 2	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.
	KIKU+	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

HAWAII—continued

County	Call letters, channel number, and market name		
Honolulu 3	KHON+	2	Honolulu.
	KHVH+	4	Do.
	KGMB+	9	Do.
Honolulu 4	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.
	KIKU+	13	Do.
Kauai	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.
Maui 1	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.
	KIKU+	13	Do.
Maui 2	KHON+	2	Do.
	KHVN+	4	Do.
	KGMB+	9	Do.
Maui 3	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.
Maui 4	KHON+	2	Do.
	KHVH+	4	Do.
	KGMB+	9	Do.

Census County Divisions in Split Counties

Hawaii 1: North Kona, South Kona.
Hawaii 2: Keaau-Mountain View, Pahoa-Kalapana.
Hawaii 3: Hilo North Hilo, Papaikow-Wailea.
Hawaii 4: Honokaa-Kukuihaela, North Hohala, Paauhau-Paauilo, South Kohala.
Hawaii 5: Kau.
Honolulu 1: Koolaupoko.
Honolulu 2: Koolauloa, Waialua, Wahiawa.
Honolulu 3: Waianae.
Honolulu 4: Ewa, Honolulu.
Maui 1: Lahaina, Hanai City.
Maui 2: Kahaului, Kihei, Puunene, Spreckelsville, Waihee-Waikapu, Wailuku.
Maui 3: Haiku-Pauwela, Hana, Kula, Makawao-Paia.
Maui 4: East Molokai, West Molokai, Kalawao.

IDAHO

County	Call letters, channel number, and market name		
Ada	KBOI	2	Boise.
	KTVB+	7	Do.
Adams	KBOI	2	Do.
	KTVB+	7	Do.
Bannock	KID	3	Idaho Falls-Pocatello.
	KTLE	6	Do.
	KIFI	8	Do.
Bear Lake	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Benewah	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Bingham	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Blaine	KMVT	11	Twin Falls.
	KID	3	Idaho Falls-Pocatello.
Boise	KBOI	2	Boise.
	KTVB+	7	Do.
Bonner	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Bonneville	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Boundary	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Butte	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Camas	KMVT	11	Twin Falls.
Canyon	KBOI	2	Boise.
	KTVB+	7	Do.
Caribou	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Cassia	KMVT	11	Twin Falls.
	KID	3	Idaho Falls-Pocatello.
	KTLE	6	Do.
	KIFI	8	Do.
Clark	KID	3	Do.
	KIFI	8	Do.
Clearwater	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KLEW	3	Yakima.
Custer	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Elmore	KBOI	2	Boise.
	KTVB+	7	Do.
Franklin	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Fremont	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Gem	KBOI	2	Boise.
	KTVB+	7	Do.
Gooding*	KMVT	11	Twin Falls.
Idaho	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KLEW	3	Yakima.
Jefferson	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Jerome	KMVT	11	Twin Falls.
Kootenai	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Latah	KREM	2	Do.
	KXLY	4	Do.
	KHQ	6	Do.
	KLEW	3	Yakima.
Lemhi	KID	3	Idaho Falls-Pocatello.
	KGVO+	13	Missoula.
Lewis	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Lincoln	KMVT	11	Twin Falls.
Madison	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Minidoka	KMVT	11	Twin Falls.
	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Nez Perce	KLEW	3	Yakima.
	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Oneida	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Owyhee	KBOI	2	Boise.
	KTVB+	7	Do.
Payette	KBOI	2	Do.
	KTVB+	7	Do.
Power	KID	3	Idaho Falls-Pocatello.
	KTLE	6	Do.
	KIFI	8	Do.
Shoshone	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Teton	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Twin Falls	KMVT	11	Twin Falls.
	KTVB+	7	Boise.
Valley	KBOI	2	Do.
	KTVB+	7	Do.
Washington	KBOI	2	Do.
	KTVB+	7	Do.

Significantly Viewed Signals—Continued

County	Call letters, channel number, and market name		
ILLINOIS			
Adams	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Alexander	WSIL+	3	Paducah-Cape Giradeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Bond	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Boone	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
	WGN	9	Chicago.
Brown	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Bureau*	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Calhoun	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Carroll	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WREX	13	Rockford.
Cass	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
	WMBD	31	Peoria.
	WICS	20	Springfield-Decatur-Champaign.
	WIRL	19	Peoria.
Champaign	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
Christian	WCIA	3	Do.
	WAND	17	Do.
	WICS	20	Do.
Clark	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
Clay	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
	KMOX	4	St. Louis.
Clinton	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Coles	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Cook	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Crawford	WTWO	2	Terre Haute.
	WTHI	10	Do.
Cumberland	WTWO	2	Do.
	WTHI	10	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WICS	20	Do.
	WAND	17	Do.
ILLINOIS—continued			
De Kalb	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
De Witt	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
	WICS	20	Do.
	WEEK	25	Peoria.
Douglas	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
Du Page	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Edgar	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
	WCIA	3	Springfield-Decatur-Champaign.
Edwards	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Effingham	WCIA	3	Springfield-Decatur-Champaign.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Fayette	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Ford	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
Franklin	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Fulton	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
Gallatin	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Greene	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Grundy	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Hamilton	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WTVW	7	Evansville.
Hancock	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WYJJ	14	Jacksonville, Ill.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ILLINOIS—continued			
Hardin	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Henderson	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Henry	WHBF	4	Do.
	WOC	6	Do.
	WQAD	8	Do.
Iroquois	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Jackson	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	KPLR	11	St. Louis.
Jasper	WTWO	2	Terre Haute.
	WTHI	10	Do.
Jefferson	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Jersey	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Jo Daviess	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WISC	3	Madison.
	WREX	13	Rockford.
	WTVO	17	Do.
Johnson	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Kane	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Kankakee	WBBM	2	Do.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Kendall	WBBM	2	Do.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Knox	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
Lake	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
La Salle	WBBM	2	Do.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WEEK+	25	Peoria.
Lawrence	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
Lee	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WGN	9	Chicago.
	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
Livingston	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
	WCIA	3	Springfield-Decatur-Champaign.
Logan	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
	WICS	20	Do.
McDonough	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
McHenry	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
McLean	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
Macon	WCIA	3	Do.
	WAND	17	Do.
	WICS	20	Do.
Macoupin	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Madison	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Marion	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Marshall	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ILLINOIS—continued			
Mason	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
Massac	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Menard	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
	WAND	17	Springfield-Decatur-Champaign.
	WICS	20	Do.
Mercer	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Monroe	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Montgomery	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	WICS	20	Springfield-Decatur-Champaign.
Morgan	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
	KTVI	2	St. Louis.
	KPLR	11	Do.
	WICS	20	Springfield-Decatur-Champaign.
Moultrie	WCIA	3	Do.
	WICD	15	Do.
	WAND	17	Do.
	WICS	20	Do.
Ogle	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
Peoria	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
Perry	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	KFVS	11	Do.
Piatt	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
	WICS	20	Do.
Pike	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
	KTVI	2	St. Louis.
	KSD	5	Do.
	KPLR	11	Do.
Pope	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Pulaski	WSIL+	3	Do.
	WPSD	6	Do.
	KFVS	12	Do.
Putnam	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Randolph	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Richland	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
Rock Island	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
St. Clair	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Saline	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Sangamon	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
	WICS	20	Do.
Schuyler	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Scott	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
	KTVI	2	St. Louis.
	KSD	5	Do.
	KPLR	11	Do.
Shelby	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
	WICS	20	Do.
Stark	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
Stephenson	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
	WISC	3	Madison.
Tazewell	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.
Union	SWIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Vermilion	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
	WTWO	2	Terre Haute.
Wabash	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Warren	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Washington	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

ILLINOIS—continued

County	Call letters, channel number, and market name		
Wayne	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
White	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
Whiteside	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Will	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Williamson	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Winnebago	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
Woodford	WIRL	19	Peoria.
	WEEK+	25	Do.
	WMBD	31	Do.

INDIANA

County	Call letters, channel number, and market name		
Adams	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Allen	WANE	15	Do.
	WPTA	21	Do.
	WKJG	33	Do.
Bartholomew	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Benton	WTTV	4	Do.
	WFBM	6	Do.
	WLWI	13	Do.
	WGN	9	Chicago.
	WLFI	18	Lafayette, Ind.
	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
Blackford	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Boone	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Brown	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Carroll	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WLFI	18	Lafayette, Ind.

SIGNIFICANTLY VIEWED SIGNALS—Continued

INDIANA—continued

County	Call letters, channel number, and market name		
Cass	WFBM	6	Indianapolis.
	WISH	8	Do.
	WLWI	13	Do.
	WLFI	18	Lafayette, Ind.
Clark	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Clay	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Clinton	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Crawford	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTVW	7	Evansville.
Daviess	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
	WTTV	4	Indianapolis.
Dearborn	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Decatur	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
De Kalb	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Delaware	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Dubois	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WTTV	4	Indianapolis.
	WAVE	3	Louisville.
	WHAS	11	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Elkhart	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Fayette	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WHIO	7	Dayton.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
Floyd	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Fountain	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Franklin	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WTTV	4	Indianapolis.
Fulton	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Gibson	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

INDIANA—continued

County	Call letters, channel number, and market name		
Grant	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Greene	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
Hamilton	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Hancock	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Harrison	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Hendricks	WTTV	4	Indianpolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Henry	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Howard	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Huntington	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Jackson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Jasper	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
Jay	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WANE	15	Fort Wayne
	WPTA	21	Do.
	WKJG	33	Do.
Jefferson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WTTV	4	Indianapolis.
Jennings	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Johnson	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Knox	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
Kosciusko	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

INDIANA—continued

County	Call letters, channel number, and market name		
La Grange	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Lake	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
La Porte	WBBM	2	Do.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
	WNDU	16	South Bend-Eikhart.
	WSBT	22	Do.
Lawrence	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Madison	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Marion	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Marshall	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WGN	9	Chicago.
Martin	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
	WTTV	4	Indianapolis.
	WAVE	3	Louisville.
Miami *	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WNDU	16	South Bend-Elkhart.
Monroe	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Montgomery	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Morgan	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Newton*	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
Noble	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Ohio	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
INDIANA—continued			
Orange	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTTV	4	Indianapolis.
Owen	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Parke	WTWO	2	Do.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
Perry	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Pike	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WTTV	4	Indianapolis.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Porter	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Posey	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Pulaski	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
Putnam	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Randolph	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
Ripley	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WTTV	4	Indianapolis.
Rush	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
St. Joseph	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WGN	9	Chicago.
Scott	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTTV	4	Indianapolis.
Shelby	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Spencer	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Starke	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
Steuben	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
	WKZO	3	Grand Rapids-Kalamazoo.
Sullivan	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
Switzerland	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Tippecanoe	WLFI	18	Lafayette, Ind.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Tipton	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Union	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WHIO	7	Dayton.
	WKTR	16	Do.
	WTTV	4	Indianapolis.
Vanderburgh	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Vermillion	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
	WCIA	3	Springfield-Decatur-Champaign.
Vigo	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
Wabash	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Warren	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WTHI	10	Terre Haute.
Warrick	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Washington	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTTV	4	Indianapolis.
Wayne	WLWD	2	Dayton.
	WHIO	7	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
INDIANA—continued			
Wells	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
White	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WGN	9	Chicago.
	WLFI	18	Lafayette, Ind.
Whitley	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
IOWA			
Adair	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Adams	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Allamakee	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WKBT	8	La Crosse-Eau Claire.
	KROC	10	Rochester-Mason City-Austin.
Appanoose	KTVO	3	Ottumwa-Kirksville.
	KRNT	8	Des Moines.
	WHO	13	Do.
Audubon	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Benton	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Black Hawk	WMT	2	Do.
	KWWL	7	Do.
	KCRG	9	Do.
Boone	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Bremer	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Buchanan	WMT	2	Do.
	KWWL	7	Do.
	KCRG	9	Do.
Buena Vista	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Butler	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	KGLO	3	Rochester-Mason City-Austin.
Calhoun	WOI	5	Des Moines.
	KRNT	8	Do.
	KVFD	21	Fort Dodge.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Carroll	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
	WOW	6	Omaha.
Cass	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
IOWA—continued			
Cedar	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Cerro Gordo	KGLO	3	Rochester-Mason City-Austin
	KAUS	6	Do.
	KROC	10	Do.
Cherokee	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Chickasaw	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	KGLO	3	Rochester-Mason City-Austin.
	KROC	10	Do.
Clarke	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Clay	KTIV	4	Sioux City.
	KCAU	9	Do.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Clayton	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Clinton	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Crawford	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Dallas	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Davis	KTVO	3	Ottumwa-Kirksville.
	KRNT	8	Des Moines.
	WHO	13	Do.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Decatur	KRNT	8	Des Moines.
	WHO	13	Do.
	KTVO	3	Ottumwa-Kirksville.
Delaware	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Des Moines	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Dickinson	KTIV	4	Sioux City.
	KCAU	9	Do.
	KEYC	12	Mankato.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Dubuque	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	KDUB	40	Dubuque, Ia.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	IOWA—continued		
Emmet	KEYC	12	Mankato.
	KAUS	6	Rochester-Mason City-Austin.
	KCAU	9	Sioux City.
Fayette	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Floyd	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Franklin	KGLO	3	Rochester-Mason City-Austin.
	KROC	10	Do.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WOI	5	Des Moines.
Fremont	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Greene	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Grundy	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Guthrie	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Hamilton	WOI	5	Do.
	KRNT	8	Do.
	WHO	13	Do.
Hancock	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Hardin	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Harrison	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Henry	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	KTVO	3	Ottumwa-Kirksville.
Howard	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	KWWL	7	Cedar Rapids-Waterloo.
	KCRG	9	Do.
Humboldt	WOI	5	Des Moines.
	KRNT	8	Do.
	KVFD	21	Fort Dodge.
Ida	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Iowa	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Jackson	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Jasper	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Jefferson	KTVO...	3	Ottumwa-Kirksville.
	WMT	2	Cedar Rapids-Waterloo.
	KCRG	9	Do.
	WOC	6	Davenport-Rock Island (Quad City).
	KHQA	7	Quincy-Hannibal.
Johnson	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
Jones	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Keokuk	WMT	2	Do.
	KWWL	7	Do.
	KCRG	9	Do.
	WHO	13	Des Moines.
	KTVO	3	Ottumwa-Kirksville.
Kossuth	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KVFD	21	Fort Dodge.
	KEYC	12	Mankato.
Lee	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Linn	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Louisa	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Lucas	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Lyon	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Madison	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Mahaska	KRNT	8	Do.
	WHO	13	Do.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	KTVO	3	Ottumwa-Kirksville.
Marion	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Marshall	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
IOWA—continued			
Mills	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Mitchell	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Monona	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Monroe	KRNT	8	Des Moines.
	WHO	13	Do.
	KTVO	3	Ottumwa-Kirksville.
Montgomery	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Muscatine	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
O'Brien	KTIV	4	Sioux City.
	KCAU	9	Do.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Osceola	KELO+	11	Do.
	KSOO+	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Page	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Palo Alto	KTIV	4	Sioux City.
	KCAU	9	Do.
	KVFD	21	Fort Dodge.
	KEYC	12	Mankato.
Plymouth	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO+	11	Sioux Falls-Mitchell.
Pocahontas	KTIV	4	Sioux City.
	KCAU	9	Do.
	KRNT	8	Des Moines.
	KVFD	21	Fort Dodge.
Polk	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Pottawattamie	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Poweshiek	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Ringgold	WOI	5	Do.
	KRNT	8	Do.
	WHO	13	Do.
	WOW	6	Omaha.
	KQTV	2	St. Joseph.
Sac	KTIV	4	Sioux City.
	KCAU	9	Do.
	WOW	6	Omaha.
Scott	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Shelby	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Sioux	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
IOWA—continued			
Story	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Tama	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WHO	13	Des Moines.
Taylor	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Union	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
	KETV	7	Omaha.
Van Buren	KTVO	3	Ottumwa-Kirksville.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Wapello	KRNT	8	Des Moines.
	WHO	13	Do.
	KTVO	3	Ottumwa-Kirksville.
Warren	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Washington	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
Wayne	KRNT	8	Des Moines.
	WHO	13	Do.
	KTVO	3	Ottumwa-Kirksville.
Webster	WOI	5	Des Moines.
	KRNT	8	Do.
	KVFD	21	Fort Dodge.
Winnebago	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	KEYC	12	Mankato.
Winneshiek	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WKBT	8	La Crosse-Eau Claire.
	KGLO	3	Rochester-Mason City-Austin.
	KROC	10	Do.
Woodbury	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Worth	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Wright*	WOI	5	Des Moines.
	KVFD	21	Fort Dodge.
	KGLO	3	Rochester-Mason City-Austin.
KANSAS			
Allen	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Anderson	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	WIBW	13	Topeka.
Atchison	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
	KTSB	27	Topeka.

SIGNIFICANTLY VIEWED SIGNALS—Continued

KANSAS—continued

County	Call letters, channel number, and market name		
Barber	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
	KTEN	10	Ardmore-Ada.
Barton	KCKT	2	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Bourbon	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KCMO	5	Kansas City.
Brown	WDAF	4	Do.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
	WIBW	13	Topeka.
Butler	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Chase	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
	WIBW	13	Topeka.
Chautauqua	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Cherokee	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Cheyenne	KAYS+	7	Wichita-Hutchinson.
	KOMC	8	Do.
	KHOL+	13	Lincoln-Hastings-Kearney.
Clark	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Clay	WIBW	13	Topeka.
	KHTL	4	Lincoln-Hastings-Kearney.
Cloud	KHTL	4	Do.
	KOLN+	10	Lincoln-Hastings-Kearney.
	WIBW	13	Topeka.
	KTVH	12	Wichita-Hutchinson.
Coffey	WIBW	13	Topeka.
	KOAM	7	Joplin-Pittsburg.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Comanche	KTVC	6	Wichita-Hutchinson.
	KUPK	13	Do.
Cowley	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Crawford	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Decatur	KOMC	8	Wichita-Hutchinson.
	KHOL+	13	Lincoln-Hastings-Kearney.
Dickinson	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
	WIBW	13	Topeka.
Doniphan	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
Douglas	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	WIBW	13	Topeka.
Edwards	KCKT	2	Wichita-Hutchinson.
	KTVC	6	Do.
	KAYS+	7	Do.
	KTVH	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

KANSAS—continued

County	Call letters, channel number, and market name		
Elk	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KOAM	7	Joplin-Pittsburg.
	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
Ellis	KCKT	2	Do.
	KAYS+	7	Do.
Ellsworth	KCKT	2	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Finney	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Ford	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Franklin	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	WIBW	13	Topeka.
Geary	WIBW	13	Do.
	KAKE	10	Do.
Gove	KAYS+	7	Do.
	KOMC	8	Do.
Graham	KAYS+	7	Do.
	KOMC	8	Do.
Grant	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Gray	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Greeley	KAYS+	7	Do.
	KGLD	11	Do.
Greenwood	KARD	3	Do.
	KAKE	10	Do.
	WIBW	13	Do.
Hamilton	KGLD	11	Wichita-Hutchinson
	KUPK	13	Do.
Harper	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Harvey	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Haskell	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Hodgeman	KCKT	2	Do.
	KTVC	6	Do.
	KAYS+	7	Do.
	KUPK	13	Do.
Jackson	WIBW	13	Topeka.
	KTSB	27	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
Jefferson	WIBW	13	Topeka.
	KTSB	27	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
Jewell	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN+	10	Do.
Johnson	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.
	KBMA	41	Do.
Kearney	KTVC	6	Witchita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
KANSAS—continued			
Kingman	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Kiowa	KCKT	2	Do.
	KTVC	6	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Labette	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Lane	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Leavenworth	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.
Lincoln	KCKT	2	Wichita-Hutchinson.
	KAYS+	7	Do.
	KTVH	12	Do.
Linn	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KOAM	7	Joplin-Pittsburg.
Logan	KAYS+	7	Wichita-Hutchinson.
	KOMC	8	Do.
Lyon	WIBW	13	Topeka.
	KTSB	27	Do.
McPherson	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Marion	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Marshall	WIBW	13	Topeka.
	KHTL	4	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
Meade	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Miami	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
Mitchell	KCKT	2	Wichita-Hutchinson.
	KAYS+	7	Do.
	KHTL	4	Lincoln-Hastings-Kearney.
Montgomery	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Morris	WIBW	13	Topeka.
	KTSB	27	Do.
	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
Morton	KGLD	11	Do.
	KUPK	13	Do.
Nemaha	WIBW	13	Topeka.
	WDAF	4	Kansas City.
	KQTV	2	St. Joseph.
Neosho	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Ness	KCKT	2	Wichita-Hutchinson.
	KAYS+	7	Do.
Norton	KAYS+	7	Do.
	KOMC	8	Do.
	KOLN+	10	Lincoln-Hastings-Kearney.
	KHOL+	13	Do.
Osage	WIBW	13	Topeka.
	KTSB	27	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Osborne	KCKT	2	Wichita-Hutchinson.
	KAYS+	7	Do.
	KHTL	4	Lincoln-Hastings-Kearney.
Ottawa	KCKT	2	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
	KHTL	4	Lincoln-Hastings-Kearney.
Pawnee	KCKT	2	Wichita-Hutchinson.
	KAYS+	7	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Phillips	KOLN+	10	Lincoln-Hastings-Kearney.
	KHOL+	13	Do.
	KHAS	5	Do.
	KAYS+	7	Wichita-Hutchinson.
Pottawatomie	WIBW	13	Topeka.
	KTSB	27	Do.
Pratt	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Rawlins	KAYS+	7	Do.
	KOMC	8	Do.
	KHOL+	13	Lincoln-Hastings-Kearney.
Reno	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Republic	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN+	10	Do.
Rice	KCKT	2	Wichita-Hutchinson.
	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Riley	WIBW	13	Topeka.
	KTSB	27	Do.
Rooks*	KCKT	2	Wichita-Hutchinson.
	KAYS+	7	Do.
Rush	KCKT	2	Do.
	KAYS+	7	Do.
Russell	KCKT	2	Do.
	KAYS+	7	Do.
Saline	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Scott	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Sedgwick	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Seward	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Shawnee	WIBW	13	Topeka.
	KTSB	27	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Sheridan	KAYS+	7	Wichita-Hutchinson.
	KOMC	8	Do.
Sherman	KAYS+	7	Do.
	KOMC	8	Do.
Smith	KHTL	4	Lincoln-Hastings Kearney.
	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
KANSAS—continued			
Stafford	KCKT	2	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Stanton	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Stevens	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Sumner	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Thomas	KAYS+	7	Do.
	KOMC	8	Do.
Trego	KCKT	2	Do.
	KAYS+	7	Do.
Wabaunsee	WIBW	13	Topeka.
	KTSB	27	Do.
	KCMO	5	Kansas City.
	KMBC	9	Do.
Wallace	KAYS+	7	Wichita-Hutchinson.
Washington	KHTL	4	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	WIBW	13	Topeka.
Wichita	KAYS+	7	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Wilson	KOAM		Joplin-Pittsburg.
	KODE	12	Do.
	KOTV	6	Tulsa.
Woodson	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	WIBW	13	Topeka.
Wyandotte	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.
KENTUCKY			
Adair	WAVE	3	Louisville.
	WHAS	11	Do.
	WLAC	5	Nashville.
Allen	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Anderson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Ballard	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Barren	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Bath	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Bell	WATE	6	Knoxville.
	WBIR	10	Do.
Boone	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
KENTUCKY—continued			
Bourbon	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Boyd	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Boyle	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Bracken	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Breathitt	WSAZ	3	Charleston-Huntington.
	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Breckinridge	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTVW	7	Evansville.
Bullitt	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Butler	WSM	4	Nashville.
	WLAC	5	Do.
	WBKO	13	Bowling Green.
	WTVW	7	Evansville.
Caldwell	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
Calloway	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Campbell	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Carlisle	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Carroll	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WTTV	4	Indianapolis.
	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Carter	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Casey	WLEX	18	Lexington.
	WKYT	27	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Christian	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Clark	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	KENTUCKY—continued		
Clay	WATE	6	Knoxville.
	WBIR	10	Do.
Clinton	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Crittenden	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WTVW	7	Evansville.
Cumberland	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Daviess	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Edmonson	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WBKO	13	Bowling Green.
Elliott	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Estill	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Fayette	WLEX	18	Do.
	WKYT	27	Do.
	WBLG	62	Do.
Fleming	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WLEX	18	Lexington.
Floyd	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Franklin*	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WKRC	12	Cincinnati.
	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Fulton	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Gallatin	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Garrard*	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Grant	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Graves	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Grayson	WAVE	3	Louisville.
	WHAS	11	Do.
	WBKO	13	Bowling Green.
	WTVW	7	Evansville.
Green	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Greenup	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Hancock	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Hardin	WAVE	3	Do.
	WHAS	11	Do.
	WLKY	32	Do.
Harlan	WATE	6	Knoxville.
	WBIR	10	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
Harrison	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WLEX	18	Lexington.
Hart	WSM	4	Nashville.
	WLAC	5	Do.
	WBKO	13	Bowling Green.
	WAVE	3	Louisville.
	WHAS	11	Do.
Henderson	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Henry	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Hickman	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Hopkins	WTVW	7	Evansville.
	WEHT	25	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
ackson	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WATE	6	Knoxville.
	WBIR	10	Do.
Jefferson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Jessamine	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Johnson	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Kenton	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Knott	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WSAZ	3	Charleston-Huntington.
	WLOS	13	Greenville-Spartanburg-Asheville.
	WLEX	18	Lexington.
Knox	WATE	6	Knoxville.
	WBIR	10	Do.
Larue	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Laurel	WATE	6	Knoxville.
	WBIR	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
KENTUCKY—continued			
Lawrence	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Lee	WLEX	18	Lexington.
	WKYT	27	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
Leslie	WCYB	5	Do.
	WJHL	11	Do.
	WBIR	10	Knoxville.
Letcher	WHTN	13	Charleston-Huntington.
	WCYB	5	Bristol-Kingsport-Johnson City.
Lewis *	WSAZ	3	Charleston-Huntington.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Lincoln	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Livingston	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Logan	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Lyon	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
McCracken	WSIL+	3	Do.
	WPSD	6	Do.
	KFVS	12	Do.
McCreary	WATE	6	Knoxville.
	WBIR	10	Do.
McLean	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WLAC	5	Nashville.
Madison	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Magoffin	WSAZ	3	Charleston-Huntington.
Marion	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Marshall	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Martin	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Mason	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Meade	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Menifee	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Mercer	WLEX	18	Do.
	WKYT	27	Do.
	WBLG	62	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Metcalfe	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Monroe	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Montgomery *	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Morgan	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Muhlenberg	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WBKO	13	Bowling Green.
	WTVW	7	Evansville.
	WEHT	25	Do.
Nelson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Nicholas	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Ohio	WTVW	7	Evansville.
	WEHT	25	Do.
	WBKO	13	Bowling Green.
	WSM	4	Nashville.
	WLAC	5	Do.
Oldham	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Owen	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Owsley	WLEX	18	Lexington.
	WKYT	27	Do.
	WATE	6	Knoxville.
Pendleton	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Perry	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Pike	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Powell	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Pulaski	WATE	6	Knoxville.
	WBIR	10	Do.
	WLEX	18	Lexington.
	WKYT	17	Do.
	WBLG	62	Do.
Robertson	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WLEX	18	Lexington.
Rockcastle	WLEX	18	Do.
	WKYT	27	Do.
	WBLG	62	Do.
Rowan	WSAZ	3	Charleston-Huntington.
Russell	WATE	6	Knoxville.
	WBIR	10	Do.
	WHAS	11	Louisville.
	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	KENTUCKY—continued		
Scott	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Shelby	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Simpson	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Spencer	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Taylor	WAVE	3	Do.
	WHAS	11	Do.
Todd	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Trigg	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
Trimble	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WTTV	4	Indianapolis.
Union	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
Warren	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WBKO	13	Bowling Green.
Washington	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Wayne	WATE	6	Knoxville.
	WBIR	10	Do.
Webster	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Whitley	WATE	6	Knoxville.
	WBIR	10	Do.
Wolfe	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WLEX	18	Lexington.
	WKYT	27	Do.
Woodford	WLEX	18	Do.
	WKYT	27	Do.
	WBLG	62	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

Parish	Call letters, channel number, and market name		
	LOUISIANA		
Acadia	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
	KALB	5	Alexandria, La.
	LOUISIANA—continued		
Allen	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KALB	5	Alexandria, La.
	KPLC	7	Lake Charles.
Ascension	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Assumption	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Avoyelles	KALB	5	Alexandria, La.
	WAFB	9	Baton Rouge.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
Beauregard	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KALB	5	Alexandria, La.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KPLC	7	Lake Charles.
Bienville	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Bossier	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Caddo	KTBS	3	Do.
	KTAL	6	Do.
	KSLA	12	Do.
Calcasieu	KPLC	7	Lake Charles.
	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
Caldwell	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Cameron	KPLC	7	Lake Charles.
	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
Catahoula	KNOE	8	Monroe-El Dorado.
	KALB	5	Alexandria, La.
Claiborne	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Concordia	KNOE	8	Do.
	KALB	3	Alexandria, La.
De Soto	KTBS	5	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
East Baton Rouge.	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
East Carroll	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
East Feliciana	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Evangeline	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KALB	5	Alexandria, La.
Franklin	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

Parish	Call letters, channel number, and market name		
LOUISIANA—continued			
Grant	KALB	5	Alexandria, La.
	KNOE	8	Monroe-El Dorado.
Iberia	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Iberville	WBRZ	2	Do.
	WAFB	9	Do.
Jackson	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
Jefferson	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Jefferson Davis	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KPLC	7	Lake Charles.
Lafayette	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Lafourche	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WAFB	9	Baton Rouge.
La Salle	KNOE	8	Monroe-El Dorado.
	KALB	5	Alexandria, La.
Lincoln*	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	KTBS	3	Shreveport-Texarkana.
Livingston	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	WWL	4	New Orleans.
Madison	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KNOE	8	Monroe-El Dorado.
Morehouse	KNOE	8	Do.
	KTVE	10	Do.
Natchitoches	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
	KALB	5	Alexandria, La.
	KNOE	8	Monroe-El Dorado.
Orleans	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WWOM	26	Do.
Ouachita	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Plaquemines	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Pointe Coupee	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Rapides	KALB	5	Alexandria, La.
	KLFY	10	Lafayette, La.
	KNOE	8	Monroe-El Dorado.
Red River	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Richland	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	WLBT	3	Jackson, Miss.
Sabine	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KALB	5	Alexandria, La.
St. Bernard	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
St. Charles	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
St. Helena	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
St. James	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
St. John the Baptist.	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WAFB	9	Baton Rouge.
St. Landry	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KALB	5	Alexandria, La.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
St. Martin	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
St. Mary	WBRZ	2	Do.
	WAFB	9	Do.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
St. Tammany	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Tangipahoa	WWL	4	Do.
	WDSU	6	Do.
	WVUE	8	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Tensas	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KNOE	8	Monroe-El Dorado.
Terrebonne	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Union	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Vermilion *	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
Vernon	KALB	5	Alexandria, La.
	KTBS	3	Shreveport-Texarkana.
Washington	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WLOX	13	Baton Rouge.
Webster	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
West Baton Rouge.	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
West Carroll	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
West Feliciana	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	KATC	3	Lafayette, La.
Winn	KNOE	8	Monroe-El Dorado.
	KALB	5	Alexandria, La.

County	Call letters, channel number and market name		
MAINE			
Androscoggin	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MAINE—continued			
Aroostook	WAGM	8	Presque Isle.
	CHSJ	4	Canada.
Cumberland	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Franklin	WCSH	6	Do.
	WMTW	8	Do.
	WGAN	13	Do.
	WABI	5	Bangor.
Hancock	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
Kennebec	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
	WLBZ	2	Bangor.
	WABI	5	Do.
Knox	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Lincoln	WCSH	6	Do.
	WMTW	8	Do.
	WGAN	13	Do.
Oxford	WCSH	6	Do.
	WMTW	8	Do.
	WGAN	13	Do.
	WABI	5	Bangor.
Penobscot	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
Piscataquis	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
Sagadahoc	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Somerset	WLBZ	2	Bangor.
	WABI	5	Do.
	WEMT	7	Do.
	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Walde	WLBZ	2	Bangor.
	WABI	5	Do.
	WEMT	7	Do.
Washington*	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
	CHSJ	4	Canada.
York	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
MARYLAND			
Allegany	WTTG	5	Washington, D.C.
	WMAL	7	Do.
	WTOP	9	Do.
	WJAC	6	Johnstown-Altoona.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MARYLAND—continued			
Anne Arundel	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Baltimore including Baltimore City.	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
Calvert	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
Caroline	WMAR	2	Do.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
Carroll	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Cecil	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
Charles	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Dorchester	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WBOC	16	Salisbury.
	WRC	4	Washington, D.C
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Frederick*	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
Garrett	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WJAC	6	Johnstown-Altoona.
Harford	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
Howard	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	0	Do.
Kent	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WTOP	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MARYLAND—continued			
Montgomery	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Prince Georges	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Queen Annes	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
St. Marys	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
Somerset	WBOC	16	Salisbury.
	WTTG	5	Washington, D.C.
Talbot	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Washington	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WHAG	25	Hagerstown, Md.
Wicomico	WBOC	16	Salisbury.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
Worcester	WBOC	16	Salisbury.
	WTTG	5	Washington, D.C.
MASSACHUSETTS			
Barnstable*	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
Berkshire	WRGB	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
	WAST	13	Do.
	WTIC	3	Hartford-New Haven.
Bristol	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Dukes	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
Essex	WBZ	4	Do.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
MASSACHUSETTS—continued			
Franklin	WWLP+	22	Springfield, Mass.
	WHYN	40	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WTIC	3	Hartford-New Haven.
Hampden*	WWLP+	22	Springfield, Mass.
	WHYN	40	Do.
	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
	WHNB	30	Do.
Hampshire	WWLP+	22	Springfield, Mass.
	WHYN	40	Do.
	WTIC	3	Hartford-New Haven.
Middlesex	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Nantucket	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
Norfolk	WBZ	4	Do.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Plymouth	WBZ	4	Do.
	WHDH	5	Do.
	WSBK	38	Do.
	WKBG	56	Do.
	WNAC	7	Do.
	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
Suffolk	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Worcester	WBZ	4	Do.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
	WJAR	10	Providence.
	WPRI	12	Do.
	WSMW	27	Worcester.
MICHIGAN			
Alcona	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
Alger	WLUC	6	Marquette.
	WFRV +	5	Green Bay.
Allegan	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Alpena	WPBN +	7	Traverse City-Cadillac.
	WWTV +	9	Do.
Antrim	WPBN +	7	Do.
	WWTV +	9	Do.
Arenac	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WWTV +	9	Traverse City-Cadillac.
Baraga*	WLUC	6	Marquette.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MICHIGAN—continued			
Barry	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
	WJIM	6	Lansing.
Bay	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WKNX	25	Do.
Benzie	WPBN +	7	Traverse City-Cadillac.
	WWTV +	9	Do.
Berrien	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Branch	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WJIM	6	Lansing.
	WILX	10	Do.
Calhoun	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WJIM	6	Lansing.
	WILX	10	Do.
Cass	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WGN	9	Chicago.
	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
Charlevoix	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Cheboygan	WPBN+	7	Do.
	WWTV+	9	Do.
Chippewa	WPBN+	7	Do.
	WWTV+	9	Do.
	CJIC	2	Canada.
Clare	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WPBN	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Clinton	WJIM	6	Lansing.
	WILX	10	Do.
	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WOOD	8	Grand Rapids-Kalamazoo.
Crawford	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Delta	WFRV+	5	Green Bay.
	WLUK	11	Do.
	WLUC	6	Marquette.
Dickinson	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
	WLUC	6	Marquette.
Eaton	WJIM	6	Lansing.
	WILX	10	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
Emmet	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Genesee	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	WKBD	50	Do.
	WJIM	6	Lansing.
Gladwin	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WWTV+	9	Traverse City-Cadillac.
Gogebic	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
	WAEO	12	Wausau-Rhinelander.
Grand Traverse	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Gratiot	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WOOD	8	Grand Rapids-Kalamazoo.
	WJIM	6	Lansing.
Hillsdale	WJIM	6	Do.
	WILX	10	Do.
	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
Houghton	WLUC	6	Marquette.
	WFRV+	5	Green Bay.
Huron *	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
Ingham	WJIM	6	Lansing.
	WILX	10	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
Ionia	WKZO	3	Do.
	WOOD	8	Do.
	WZZM	13	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WJIM	6	Lansing.
Iosco	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
Iron	WLUC	6	Marquette.
	WFRV+	5	Green Bay.
	WAEO	12	Wausau-Rhinelander.
Isabella	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WJIM	6	Lansing.
	WWTV	9	Traverse City-Cadillac.
Jackson	WJIM	6	Lansing.
	WILX	10	Do.
	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
Kalamazoo	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Kalkaska	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	MICHIGAN—continued		
Kent	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Keweenaw	WLUC	6	Marquette.
	CKPR	2	Canada.
Lake	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
	WZZM	13	Grand Rapids-Kalamazoo.
Lapeer	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WJIM	6	Lansing.
Leelanau	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Lenawee*	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Livingston	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WJIM	6	Lansing.
Luce	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
	WFRV+	5	Green Bay.
	WLUC	6	Marquette.
	CJIC	2	Canada.
Mackinac	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
	WFRV	5	Green Bay.
	CJIC	2	Canada.
Macomb	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
Manistee	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
	WZZM	13	Grand Rapids-Kalamazoo.
	WBAY	2	Green Bay.
	WLUK	11	Do.
Marquette	WLUC	6	Marquette.
	WFRV+	5	Green Bay.
	WLUK	11	Do.
Mason	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
	WZZM	13	Grand Rapids-Kalamazoo.
	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Mecosta	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
	WZZM	13	Grand Rapids-Kalamazoo.
Menominee	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
	WLUC	6	Marquette.
Midland	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WWTV+	9	Traverse City-Cadillac.
Missaukee	WPBN+	7	Do.
	WWTV+	9	Do.
Monroe	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
	WTOL	11	Toledo.
	WDHO	24	Do.
	WSPD	13	Do.
Montcalm	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WJIM	6	Lansing.
	WWTV	9	Traverse City-Cadillac.
Montmorency	WPBN+	7	Do.
	WWTV+	9	Do.
Muskegon	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Newaygo	WKZO	3	Do.
	WOOD	8	Do.
	WZZM	13	Do.
	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Oakland	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
Oceana	WKZO	3	Grand Rapids-Kalmazoo.
	WZZM	13	Do.
	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Ogemaw	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WWTV+	9	Traverse City-Cadillac.
Ontonagon	WLUC	6	Marquette.
	KDAL	3	Duluth-Superior.
	WAEO	12	Wausau-Rhinelander.
Osceola	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
	WNEM	5	Flint-Saginaw-Bay City.
	WZZM	13	Grand Rapids-Kalamazoo.
Oscoda	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
	WNEM	5	Flint-Saginaw-Bay City.
Otsego	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Ottawa	WKZO	3	Grand Rapids-Kalmazoo.
	WOOD	8	Do.
	WZZM	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	MICHIGAN—continued		
Presque Isle	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
Roscommon	WPBN+	7	Do.
	WWTV+	9	Do.
	WNEM	5	Flint-Saginaw-Bay City.
Saginaw	WNEM	5	Do.
	WJRT	12	Do.
	WKNX	25	Do.
St. Clair	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
St. Joseph	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Sanilac	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	CFPL	10	Canada.
Schoolcraft	WLUC	6	Marquette.
	WFRV+	1	Green Bay.
Shiawassee	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WJIM	6	Lansing.
	WILX	10	Do.
Tuscola	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WKNX	25	Do.
Van Buren	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Washtena	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
Wayne	WJBK	2	Do.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
Wexford	WPBN+	7	Traverse City-Cadillac.
	WWTV+	9	Do.
	MINNESOTA		
Aitkin	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
	KNMT	12	Alexandria, Minn.
Anoka	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Becker	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Beltrami	KNMT	12	Alexandria, Minn.
	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	KTHI	11	Fargo.
	MINNESOTA—continued		
Benton	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
Big Stone*	KCMT	7	Do.
	KELO+	11	Sioux Falls-Mitchell.
Blue Earth	KEYC	12	Mankato.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KAUS	6	Rochester-Mason City-Austin.
Brown	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.
	KAUS	6	Rochester-Mason City-Austin.
Carlton	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
Carver	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Cass	KCMT	7	Alexandria, Minn.
	KNMT	12	Do.
	KDAL	3	Duluth-Superior.
	WDIO+	10	Do.
Chippewa	KCMT	7	Alexandria, Minn.
	WCCO	4	Minneapolis-St. Paul.
	KMSP	9	Do.
	WTCN	11	Do.
Chisago	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Clay	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Clearwater	KXJB	4	Do.
	WDAY	6	Do.
	KTHI	11	Do.
Cook	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
	CKPR	2	Canada.
Cottonwood	KEYC	12	Mankato.
	KSTP	5	Minneapolis-St. Paul.
	WTCN	11	Do.
	KAUS	6	Rochester-Mason City-Austin.
Crow Wing	KCMT	7	Alexandria, Minn.
	KNMT	12	Do.
	KDAL	3	Duluth-Superior.
Dakota	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Dodge	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
Douglas	KCMT	7	Alexandria, Minn.
Faribault	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	KEYC	12	Mankato.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MINNESOTA—continued			
Fillmore	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	WKBT	8	La Crosse-Eau Claire.
Freeborn	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Goodhue	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Grant*	KCMT	7	Alexandria, Minn.
Hennepin	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Houston	WKBT	8	La Crosse, Eau Claire.
	KROC	10	Rochester-Mason City-Austin.
Hubbard	KNMT	12	Alexandria, Minn.
Isanti	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Itasca	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
	KNMT	12	Alexandria, Minn.
Jackson	KEYC	12	Mankato.
	KCAU	9	Sioux City.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Kanabec	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Kandiyohi	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
Kittson	KXJB	4	Fargo.
	WDAZ	8	Do.
	KCND	12	Pembina.
	CBWT	6	Canada.
	CJAY	7	Do.
Koochiching	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
	CBWT	6	Canada.
Lac qui Parle	KCMT	7	Alexandria, Minn.
	KELO+	11	Sioux Falls-Mitchell.
Lake	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
Lake of the Woods.	CBWT	6	Canada.
Le Sueur	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.
Lincoln	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
Lyon	KELO+	11	Do.
	KSOO+	13	Do.
	KEYC	12	Mankato.
McLeod	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Mahnomen	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Marshall	KXJB	4	Fargo.
	WDAZ	8	Do.
	KTHI	11	Do.
	KCND	12	Pembina.
	CBWT	6	Canada.
Martin	KEYC	12	Mankato.
	KAUS	6	Rochester-Mason City-Austin.
	KROC	10	Do.
Meeker	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
Mille Lacs	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Morrison	KCMT	7	Alexandria, Minn.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Mower	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Murray	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Nicollet	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.
Nobles	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
	KCAU	9	Sioux City.
Norman	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Olmsted	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Otter Tail	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
	KCMT	7	Alexandria, Minn.
Pennington	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
Pine	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Pipestone	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
Polk	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Pope	KCMT	7	Alexandria, Minn.
Ramsey	WCCO	4	Minneapolis-St. Paul
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Red Lake	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
			MINNESOTA—continued
Redwood	KEYC	12	Mankato.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Renville	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
	KEYC	12	Mankato.
Rice	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Rock	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
	KCAU	9	Sioux City.
Roseau	KCND	12	Pembina.
	WDAZ	8	Fargo.
	CBWT	6	Canada.
	CJAY	7	Do.
St. Louis	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
Scott	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Sherburne	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Sibley	WCCO	4	Minneapolis- St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.
Stearns	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
Steele	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	KEYC	12	Mankato.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Stevens	KCMT	7	Alexandria, Minn.
	KELO+	11	Sioux Falls-Mitchell.
Swift	KCMT	7	Alexandria, Minn.
Todd	KCMT	7	Do.
Traverse	KCMT	7	Do.
	KXJB	4	Fargo.
	KELO+	11	Sioux Falls-Mitchell.
Wabasha	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	KAUS	6	Rochester-Mason City-Austin.
	KROC	10	Do.
Wadena	KCMT	7	Alexandria, Minn.
	KNMT	12	Do.
Waseca	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.
	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Washington	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Watonwan	KEYC	12	Mankato.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	WTCN	11	Do.
	KAUS	6	Rochester-Mason City-Austin.
Wilkin	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Winona	WKBT	8	La Crosse-Eau Claire.
	KAUS	6	Rochester-Mason City-Austin.
	KROC	10	Do.
Wright	WCCO	4	Minneapliis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Yellow Medicine	WCCO	4	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
	KELO+	11	Sioux Falls-Mitchell.
			MISSISSIPPI
Adams	KNOE	8	Monroe-El Dorado.
	KALB	5	Alexandria, La.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Alcorn	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Amite	WVRZ	2	Baton Rouge.
	WAFB	9	Do.
	WLBT	3	Jackson, Miss.
Attala	WLBT	3	Do.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
Benton	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Bolivar	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WREC	3	Memphis.
	WMC	5	Do.
Calhoun	WREC	3	Do.
	WMC	5	Do.
	WCBI	4	Columbus, Miss.
	WABG	6	Greenwood-Greenville.
Carroll	WABG	6	Do.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Chickasaw	WCBI	4	Columbus, Miss.
	WMC	5	Memphis.
	WTWV	9	Tupelo.
Choctaw	WCBI	4	Columbus, Miss.
	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Claiborne	WLBT	3	Do.
	WJTV	12	Do.
Clarke	WTOK	11	Meridian.
	WDAM	7	Laurel-Hattiesburg.
Clay	WCBI	4	Columbus, Miss.
Coahoma	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Copiah	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MISSISSIPPI—continued			
Covington	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
De Soto	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Forrest	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Franklin	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WBRZ	2	Baton Rouge.
George	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Greene	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WDAM	7	Laurel-Hattiesburg.
Grenada	WABG	6	Greenwood-Greenville.
	WREC	3	Memphis.
	WMC	5	Do.
Hancock	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Harrison	WLOX	13	Do.
	WKRG	5	Mobile-Pensacola.
	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Hinds	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Holmes	WLBT	3	Do.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
Humphreys	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
Issaquena	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
	KNOE	8	Monroe-El Dorado.
Itawamba	WTWV	9	Tupelo.
	WCBI	4	Columbus, Miss.
Jackson*	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Jasper	WDAM	7	Laurel-Hattiesburg.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WTOK	11	Meridian.
Jefferson	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KNOE	8	Monroe-El Dorado.
Jefferson Davis	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WDAM	7	Laurel-Hattiesburg.
Jones	WDAM	7	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WTOK	11	Meridian.
Kemper	WTOK	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MISSISSIPPI—continued			
Lafayette	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Lamar	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Lauderdale	WTOK	11	Meridian.
Lawrence	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Leake	WLBT	3	Do.
	WJTV	12	Do.
Lee	WTWV	9	Tupelo.
	WCBI	4	Columbus, Miss.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Seflore	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Lincoln	WLBT	3	Do.
	WJTV	12	Do.
Lowndes	WCBI	4	Columbus, Miss.
Madison	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Marion	WLBT	3	Do.
	WJTV	12	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WDAM	7	Laurel-Hattiesburg.
Marshall	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Monroe	WCBI	4	Columbus, Miss.
	WTWV	9	Tupelo.
Montgomery	WABG	6	Greenwood-Greenville.
	WCBI	4	Columbus, Miss.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WMC	5	Memphis.
Neshoba	WTOK	11	Meridian.
	WLBT	3	Jackson, Miss.
Newton	WTOK	11	Meridian.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Noxubee	WTOK	11	Meridian.
	WCBI	4	Columbus, Miss.
Oktibbeha	WCBI	4	Do.
Panola	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Pearl River	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Perry	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WKRG	5	Mobile-Pensacola.
Pike	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	WWL	4	New Orleans.
Pontotoc	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WTWV	9	Tupelo.
Prentiss	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WTWV	9	Tupelo.

SIGNIFICANTLY VIEWED SIGNALS—Continued

MISSISSIPPI—continued

County	Call letters, channel number, and market name		
Quitman	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Rankin	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Scott	WLBT	3	Do.
	WJTV	12	Do.
	WTOK	11	Meridian.
Sharkey	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
Simpson	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Smith	WLBT	3	Do.
	WJTV	12	Do.
	WDAM	7	Laurel-Hattiesburg.
Stone	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WDAM	7	Laurel-Hattiesburg.
	WKRG	5	Mobile-Pensacola.
	WWL	4	New Orleans.
	WDSU	6	Do.
Sunflower	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Tallahatchie	WABG	6	Greenwood-Greenville.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Tate	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Tippah	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Tishomingo	WTWV	9	Tupelo.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Tunica	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Union	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Walthall	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WDAM	7	Laurel-Hattiesburg.
	WWL	4	New Orleans.
	WDSU	6	Do.
Warren	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KNOE	8	Monroe-El Dorado.
Washington	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KTVE	10	Monroe-El Dorado.
	WABG	6	Greenwood-Greenville.
Wayne	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WTOK	11	Meridian.
	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
Webster	WCBI	4	Columbus, Miss.
	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
Wilkinson	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Winston	WTOK	11	Meridian.
	WCBI	4	Columbus, Miss.
	WLBT	3	Jackson, Miss.
Yalobusha	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WABG	6	Greenwood-Greenville.
Yazoo	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.

MISSOURI

County	Call letters, channel number, and market name		
Adair	KTVO	3	Ottumwa-Kirksville.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Andrew	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
Atchison	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KQTV	2	St. Joseph.
Audrain	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Barry	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Barton	KOAM	7	Do.
	KODE	12	Do.
	KUHI	16	Do.
Bates	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Benton	KMOS	6	Columbia-Jefferson City.
	KCMO	5	Kansas City.
	KMBC	9	Do.
	KYTV	3	Springfield, Mo.
Bollinger	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Boone	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Buchanan	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Butler	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Caldwell	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
Callaway	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Camden	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MISSOURI—continued			
Cape Girardeau	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Carroll	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Carter	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	KAIT	8	Jonesboro.
Cass	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.
Cedar	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Chariton	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Christian	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Clark	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Clay	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.
Clinton	WDAF	4	Do.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.
	KQTV	2	St. Joseph.
Cole	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Cooper	KOMU	8	Do.
	KRCG	13	Do.
Crawford	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KRCG	13	Columbia-Jefferson City.
Dade	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Dallas	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Daviess	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
De Kalb	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
Dent	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
	KRCG	13	Columbia-Jefferson City.
	KYTV	3	Springfield, Mo.
Douglas	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Dunklin	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KAIT	8	Jonesboro.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Franklin	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Gasconade	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KRCG	13	Columbia-Jefferson City.
Gentry	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Greene	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Grundy	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KTVO	3	Ottumwa-Kirksville.
	KQTV	2	St. Joseph.
Harrison	KQTV	2	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
Henry	WDAF	4	Do.
	KCMO	5	Do.
	KMBC	9	Do.
Hickory	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Holt	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Howard	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Howell	KYTV	3	Springfield, Mo.
	KMTC	27	Do.
Iron*	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Jackson	WDAF	4	Kansas City.
	KCMO	5	Do.
	WMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.
Jasper	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Jefferson	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Johnson	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Knox	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MISSOURI—continued			
Laclede	KYTV	3	Springfield, Mo.
	KTTS	10	Do
	KMTC	27	Do.
Lafayette	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.
Lawrence	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Lewis	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Lincoln	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Linn	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KTVO	3	Ottumwa-Kirksville.
Livingston	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
McDonald	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Macon	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KOMU	8	Columbia-Jefferson City.
	KTVO	3	Ottumwa-Kirksville.
Madison	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Maries	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
Marion	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Mercer	KTVO	3	Ottumwa-Kirksville.
	KRNT	8	Des Moines.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KQTV	2	St. Joseph.
Miller	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Mississippi	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Moniteau	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Monroe	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Montgomery	KOMU	8	Do.
	KRCG	13	Do.
	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MISSOURI—continued			
Morgan	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KYTV	3	Springfield, Mo.
New Madrid	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Newton	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Nodaway	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMTV	3	Omaha.
	WOW	6	Do.
Oregon	KYTV	3	Springfield, Mo.
	KAIT	8	Jonesboro.
Osage	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KTVI	2	St. Louis.
Ozark	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
Pemiscot	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Perry	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Pettis	KMOS	6	Columbia-Jefferson City.
	KOMU	8	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Phelps*	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KTVI	2	St. Louis.
Pike	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Platte	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.
	KQTV	2	St. Joseph.
Polk	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Pulaski	KYTV	3	Do.
	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Putnam	KTVO	3	Ottumwa-Kirksville.
Ralls	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Randolph	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Ray	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	MISSOURI—continued		
Reynolds	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
Ripley	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	KAIT	8	Jonesboro.
St. Charles	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
St. Clair	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
St. Francois	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
St. Louis including city of St. Louis.	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Ste. Genevieve	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDLN	30	Do.
Saline	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KMOS	6	Columbia-Jefferson City.
	KOMU	8	Do.
	KRCG	13	Do.
Schuyler	KTVO	3	Ottumwa-Kirksville.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Scotland	KHQA	7	Do.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Scott	WSIL+	3	Paducah-Cape Girardeau-Harrisburg.
	WSPD	6	Do.
	KFVS	12	Do.
Shannon	KYTV	3	Springfield, Mo.
Shelby	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Stoddard	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Stone	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Sullivan*	KTVO	3	Ottumwa-Kirksville.
	WGEM	10	Quincy-Hannibal.
Taney	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Texas	KTYV	3	Do.
	KTTS	10	Do.
	KMTC	27	Do.
Vernon	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
	KCMO	5	Kansas City.
Warren	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	MISSOURI—continued		
Washington	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Wayne	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Webster	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Worth	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
Wright	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
	MONTANA		
Beaverhead	KXLF+	4	Butte.
	KGVO+	13	Missoula.
Big Horn	KOOK	2	Billings.
	KULR	8	Do.
Blaine	KRTV	3	Great Falls.
	KFBB	5	Do.
	CJLH	7	Canada.
Broadwater	KXLF+	4	Butte.
	KRTV	3	Great Falls.
	KFBB	5	Do.
Carbon	KOOK	2	Billings.
	KULR	8	Do.
Carter	KOTA+	3	Rapid City.
	KXGN	5	Glendive.
Cascade	KRTV	3	Great Falls.
	KFBB	5	Do.
Chouteau	KRTV	3	Do.
	KFBB	5	Do.
Custer	KOOK	2	Billings.
	KULR	8	Do.
	KYUS	3	Miles City, Mont.
Daniels	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.
Dawson	KXGN	5	Glendive.
	KUMV	8	Minot-Bismarck.
Deer Lodge	KXLF+	4	Butte.
	KGVO+	13	Missoula.
Fallon	KDIX	2	Dickinson, N. Dak.
	KXGN	5	Glendive.
Fergus	KOOK	2	Billings.
	KULR	8	Do.
	KFBB	5	Great Falls.
Flathead	KCFW	9	Missoula.
	KREM	2	Spokane.
	KXLY	4	Do.
Gallatin	KXLF+	4	Butte.
	KGVO+	13	Missoula.
Garfield	KOOK	2	Billings.
	KULR	8	Do.
Glacier	KRTV	3	Great Falls.
	KFBB	5	Do.
	CJLH	7	Canada.
Golden Valley	KOOK	2	Billings.
	KULR	8	Do.
Granite	KXLF+	4	Butte.
	KGVO+	13	Missoula.
Hill	KRTV	3	Great Falls.
	KFBB	5	Do.
	CFCN	4	Canada.
	CJLH	7	Do.
Jefferson	KXLF+	4	Butte.
	KFBB	5	Great Falls.
	KGVO+	13	Missoula.
Judith Basin	KOOK	2	Billings.
	KULR	8	Do.
	KRTV	3	Great Falls.
	KFBB	5	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	MONTANA—continued		
Lake	KGVO+	13	Missoula.
	KXLF+	4	Butte.
	KXLY	4	Spokane.
Lewis and Clark	KBLL	12	Helena.
	KXLF+	4	Butte.
	KFBB	5	Great Falls.
Liberty	KRTV	3	Do.
	KFBB	5	Do.
	CFCN	4	Canada.
	CJLH	7	Do.
Lincoln	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KCFW	9	Missoula.
McCone	KUMV	8	Minot-Bismarck.
	KXGN	5	Glendive.
Madison	KXLF+	4	Butte.
	KGVO	13	Missoula.
Meagher	KRTV	3	Great Falls.
	KFBB	5	Do.
	KXLF+	4	Butte.
Mineral	KXLY	4	Spokane.
	KXLF+	4	Butte.
	KGVO+	13	Missoula.
Missoula	KGVO+	13	Do.
	KXLF+	4	Butte.
Musselshell	KOOK	2	Billings.
	KULR	8	Do.
Park	KOOK	2	Do.
	KULR	8	Do.
	KXLF+	4	Butte.
Petroleum	KOOK	2	Billings.
	KULR	8	Do.
Phillips	KRTV	3	Great Falls.
	KFBB	5	Do.
	KOOK	2	Billings.
Pondera	KRTV	3	Great Falls.
	KFBB	5	Do.
	CJLH	7	Canada.
Powder River	KOOK	2	Billings.
	KULR	8	Do.
	KOTA +	3	Rapid City.
Powell	KXLF +	4	Butte.
	KGVO +	13	Missoula.
Prairie	KXGN	5	Glendive.
	KYUS	3	Miles City, Mont.
Ravalli	KGVO +	13	Missoula.
	KXLF +	4	Butte.
Richland	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	KXGN	5	Glendive.
Roosevelt	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.
Rosebud	KOOK	2	Billings.
	KULR	8	Do.
	KYUS	3	Miles City, Mont.
Sanders	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KGVO +	13	Missoula.
Sheridan	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.
Silver Bow	KXLF +	4	Butte.
	KGVO +	13	Missoula.
Stillwater	KOOK	2	Billings.
	KULR	8	Do.
Sweet Grass	KOOK	2	Do.
	KULR	8	Do.
Teton	KRTV	3	Great Falls.
	KFBB	5	Do.
Toole	KRTV	3	Do.
	KFBB	5	Do.
	CFCN	4	Canada.
	CJLH	7	Do.
Treasure	KOOK	2	Billings.
	KULR	8	Do.
Valley	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.
Wheatland	KOOK	2	Billings.
	KULR	8	Do.
Wibaux	KDIX	2	Dickinson, N. Dak.
	KXGN	5	Glendive.
	KUMV	8	Minot-Bismarck.
Yellowstone	KOOK	2	Billings.
	KULR	8	Do.
	NEBRASKA		
Adams	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	KHOL+	13	Do.
Antelope	KHQL	8	Do.
	KOLN+	10	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Arthur	KNOP	2	North Platte.
	KHOL+	13	Lincoln-Hastings-Kearney.
Banner	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Blaine	KNOP	2	North Platte.
Boone	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN+	10	Do.
Box Butte	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Boyd	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
Brown	KELO+	11	Do.
Buffalo	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	KHOL+	13	Do.
Burt	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Butler	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
	KOLN+	10	Lincoln-Hastings-Kearney.
Cass	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN	10	Lincoln-Hastings-Kearney.
Cedar	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO+	11	Sioux Falls-Mitchell.
Chase	KHOL+	13	Lincoln-Hastings-Kearney.
	KOMC	8	Wichita-Hutchinson.
Cherry	KELO+	11	Sioux Falls-Mitchell.
	KNOP	2	North Platte.
	KDUH	4	Rapid City.
Cheyenne	KTVS	3	Cheyenne.
	KSTF	10	Do.
	KDUH	4	Rapid City.
Clay	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Colfax	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN+	10	Lincoln-Hastings-Kearney.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
NEBRASKA—continued			
Cuming	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Custer	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	KHOL+	13	Do.
	KNOP	2	North Platte.
Dakota	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Dawes	KDUH	4	Rapid City.
	KSTF	10	Cheyenne.
Dawson	KOLN+	10	Lincoln-Hastings-Kearney.
	KHOL+	13	Do.
	KNOP	2	North Platte.
Deuel	KTVS	3	Cheyenne.
	KHOL+	13	Lincoln-Hastings-Kearney.
	KNOP	2	North Platte.
Dixon	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Dodge	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Douglas	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
Dundy	KAYS+	7	Wichita-Hutchinson.
	KOMC	8	Do.
	KHOL+	13	Lincoln-Hastings-Kearney.
Fillmore	KHTL	4	Do.
	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Franklin	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Frontier	KOLN+	10	Do.
	KHOL+	13	Do.
	KNOP	2	North Platte.
	KOMC	8	Wichita-Hutchinson.
Furnas	KOLN+	10	Lincoln-Hastings-Kearney.
	KHOL+	13	Do.
	KOMC	8	Wichita-Hutchinson.
Gage	KOLN+	10	Lincoln-Hastings-Kearney.
	KMTV	3	Omaha.
	KETV	7	Do.
Garden	KTVS	3	Cheyenne.
	KSTF	10	Do.
	KHOL+	13	Lincoln-Hastings-Kearney.
	KNOP	2	North Platte.
	KDUH	4	Rapid City.
Garfield	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN+	10	Do.
Gosper	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Grant	KDUH	4	Rapid City.
	KHOL+	13	Lincoln-Hastings-Kearney.
	KNOP	2	North Platte.
Greeley	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Hall	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN+	10	
	KHOL+	13	Do.
Hamilton	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Harlan	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Hayes	KHOL+	13	Do.
	KNOP	2	North Platte.
	KOMC	8	Wichita-Hutchinson.
Hitchcock	KAYS	7	Do.
	KOMC	8	Do.
	KHOL+	13	Lincoln-Hastings-Kearney.
Holt	KHQL	8	Do.
	KOLN+	10	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
	KELO+	11	Sioux Falls-Mitchell.
Hooker	KNOP	2	North Platte.
	KDUH	4	Rapid City.
Howard	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	KHOL+	13	Do.
Jefferson	KHTL	4	Do.
	KHAS	5	Do.
	KOLN+	10	Do.
Johnson	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN+	10	Lincoln-Hastings-Kearney.
Kearney	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Keith	KNOP	2	North Platte.
	KHOL+	13	Lincoln-Hastings-Kearney.
Keya Paha	KELO+	11	Sioux Falls-Mitchell.
Kimball	KTVS	3	Cheyenne.
	KFBC	5	Do.
	KSTF	10	Do.
	KDUH	4	Rapid City.
Knox	KTIV	4	Sioux City.
	KCAU	9	Do.
	KHQL	8	Lincoln-Hastings-Kearney.
	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
Lancaster	KOLN+	10	Lincoln-Hastings-Kearney.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Lincoln	KNOP	2	North Platte.
	KOLN+	10	Lincoln-Hastings-Kearney.
	KHOL+	13	Do.
Logan	KNOP	2	North Platte.
	KHOL+	13	Lincoln-Hastings-Kearney.
Loup	KHAS	5	Do.
	KHQL	8	Do.
	KOLN+	10	Do.
McPherson	KNOP	2	North Platte.
	KHOL+	13	Lincoln-Hastings-Kearney.
Madison	KTIV	4	Sioux City.
	KCAU	9	Do.
	KHQL	8	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	WOW	6	Omaha.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
NEBRASKA—continued			
Merrick	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Morrill	KSTF	10	Cheyenne.
	KDUH	4	Rapid City
Nance	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN+	10	Do.
	KMTV	3	Omaha.
Nemaha	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
Nuckolls	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Otoe	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN+	10	Lincoln-Hastings-Kearney.
Pawnee	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN+	10	Lincoln-Hastings-Kearney.
Perkins	KHOL	+13	Do.
	KTVS	3	Cheyenne.
	KNOP	2	North Platte.
Phelps	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	KHOL+	13	Do.
Pierce	KTIV	4	Sioux City.
	KCAU	9	Do.
	KHQL	8	Lincoln-Hastings-Kearney.
	KELO+	11	Sioux Falls-Mitchell.
Platte	KHQL	8	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Polk	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN+	10	Do.
	KMTV	3	Omaha.
	KETV	7	Do.
Red Willow	KOMC	8	Wichita-Hutchinson.
	KOLN+	10	Lincoln-Hastings-Kearney.
	KHOL+	13	Do.
Richardson	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KCMO	5	Kansas City.
	KOLN+	10	Lincoln-Hastings-Kearney.
	KQTV	2	St. Joseph.
Rock	KELO+	11	Sioux Falls-Mitchell.
Saline	KHTL	4	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KMTV	3	Omaha.
	KETV	7	Do.
Sarpy	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
Saunders	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
	KOLN+	10	Lincoln-Hastings-Kearney.
Scotts Bluff	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Seward	KOLN+	10	Lincoln-Hastings-Kearney.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Sheridan	KDUH	4	Rapid City.
Sherman	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	KHOL+	13	Do.
Sioux	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Stanton	KTIV	4	Sioux City.
	KCAU	9	Do.
	KHQL	8	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Thayer	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Thomas	KNOP	2	North Platte.
Thurston	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Valley	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN+	10	Do.
	KHOL+	13	Do.
Washington	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Wayne	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Webster	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN+	10	Do.
	KHOL+	13	Do.
Wheeler	KHAS	5	Do.
	KHQL	8	Do.
	KOLN+	10	Do.
York	KHTL	4	Do.
	KHAS	5	Do.
	KOLN+	10	Do.
NEVADA			
Churchill	KCRL	4	Reno.
	KOLO	8	Do.
Clark	KORK	3	Las Vegas.
	KHBV	5	Do.
	KLAS	8	Do.
	KSHO	13	Do.
Douglas	KTVN	2	Reno.
	KCRL	4	Do.
	KOLO	8	Do.
	KTVU	2	San Francisco.
Elko	KSL	5	Salt Lake City.
	KBOI	2	Boise.
	KTVB+	7	Do.
	KOLO	8	Reno.
Esmeralda	KOLO	8	Do.
Eureka	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	NEVADA—continued		
Humboldt	KOLO	8	Reno.
	KBOI	2	Boise.
	KTVB+	7	Do.
Lander	KTVN	2	Reno.
	KOLO	8	Do.
Lincoln	KORK	3	Las Vegas.
	KLAS	8	Do.
	KCPX	4	Salt Lake City.
Lyon	KTVN	2	Reno.
	KCRL	4	Do.
	KOLO	8	Do.
Mineral	KTVN	2	Do.
	KCPL	4	Do.
	KOLO	8	Do.
Nye	KTVN	2	Do.
	KCRL	4	Do.
	KOLO	8	Do.
	KORK	3	Las Vegas.
Ormsby	KTVN	2	Reno.
	KCRL	4	Do.
	KOLO	8	Do.
Pershing	KTVN	2	Do.
	KCRL	4	Do.
	KOLO	8	Do.
Storey	KTVN	2	Do.
	KCRL	4	Do.
	KOLO	8	Do.
Washoe	KTVN	2	Do.
	KCRL	4	Do.
	KOLO	8	Do.
White Pine	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
	NEW HAMPSHIRE		
Belknap	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WMUR	9	Manchester.
Carroll	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Cheshire	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WTIC	3	Hartford-New Haven.
	WMUR	9	Manchester.
	WWLP+	22	Springfield, Mass.
Coos	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
	WCAX	3	Burlington-Plattsburgh.
Grafton	WMTW	8	Portland-Poland Spring.
	WCAX	3	Burlington-Plattsburgh.
Hillsborough	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
	WMUR	9	Manchester.
Merrimack*	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WMUR	9	Manchester.
	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	NEW HAMPSHIRE—continued		
Rockingham	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
	WMUR	9	Manchester.
Strafford	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WMUR	9	Manchester.
	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Sullivan	WBZ	4	Boston.
	WHDH	5	Do.
	WCAX	3	Burlington-Plattsburgh.
	WMUR	9	Manchester.
	WWLP+	22	Springfield, Mass.
	NEW JERSEY		
Atlantic	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Bergen	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Burlington	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Camden	KYW	3	Do.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Cape May	KYW	3	Do.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WKBS	48	Do.
Cumberland	KYW	3	Do.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Essex	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Gloucester	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WKBS	48	Do.
Hudson	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

NEW JERSEY—continued

County	Call letters, channel number, and market name		
Hunterdon	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WTAF	29	Do.
Mercer	KYW	3	Do.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WKBS	48	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Middlesex	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Monmouth	WCBS	2	Do.
	WNBC	2	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Morris	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Ocean	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WFIL	6	Philadelphia.
Passaic	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Salem	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Somerset	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Sussex	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Union	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Warren	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WPIX	11	Do.

NEW MEXICO

County	Call letters, channel number, and market name		
Bernalillo	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Catron	KOB	4	Do.
	KOAT	7	Do.
	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
Chaves	KBIM	10	Roswell.
	KCBD	11	Lubbock.
Colfax	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
	KRDO	13	Colorado Springs-Pueblo.
Curry	KVII	7	Amarillo.
	KFDA+	10	Do.
	KCBD+	11	Lubbock.
De Baca	KCBD	11	Do.
	KOAT	7	Albuquerque.
	KBIM	10	Roswell.
Dona Ana	KROD	4	El Paso.
	KTSM	9	Do.
	KELP+	13	Do.
Eddy	KBIM	10	Roswell.
	KELP+	13	El Paso.
	KCBD+	11	Lubbock.
Grant	KROD	4	El Paso.
	KTSM	9	Do.
	KOAT	7	Albuquerque.
Guadalupe	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Harding	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Hidalgo	KTVK	3	Phoenix.
	KOOL	10	Do.
	KTAR	12	Do.
	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
Lea North	KBIM	10	Roswell.
	KCBD+	11	Lubbock.
Lea South	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
	KCBD+	11	Lubbock.
	KBIM	10	Roswell.
Lincoln	KOB	4	Albuquerque.
	KCBD+	11	Lubbock.
	KBIM	10	Roswell.
Los Alamos	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Luna	KROD	4	El Paso.
	KTSM	9	Do.
	KELP+	13	Do.
McKinley	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Mora	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

NEW MEXICO—continued

County	Call letters, channel number, and market name		
Otero	KROD	4	El Paso.
	KTSM	9	Do.
	KOAT	7	Albuquerque.
Quay	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
	KOAT	7	Albuquerque.
	KCBD+	11	Lubbock.
Rio Arriba	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Roosevelt	KFDA+	10	Amarillo.
	KCBD+	11	Lubbock.
Sandoval	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
San Juan	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
San Miguel	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Santa Fe	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Sierra	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Socorro	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Taos	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Torrance	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Union	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
	KKTV	11	Colorado Springs-Pueblo.
	KRDO	13	Do.
Valencia	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.

Census county divisions in split counties

Lea North: Lea North Central, Lovington, Tatum.
Lea South: All other.

NEW YORK

County	Call letters, channel number, and market name		
Albany	WRGB	6	Albany-Schenectady-Troy.
	WTEN +	10	Do.
	WAST	13	Do.
Allegany	WGP	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Bronx	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Broome	WNBF	12	Binghamton.
	WBJA	34	Do.
	WINR	40	Do.
Cattaraugus	WGP	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Cayuga	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WHEC	10	Rochester, N.Y.
	WOKR	13	Do.
Chautauqua	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Chemung	WSYE	18	Elmira.
	WENY	36	Do.
	WNBF	12	Binghamton.
	WNEW	5	New York.
Chenango	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WNBF	12	Binghamton.
	WINR	40	Do.
Clinton	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	CBMT	6	Canada.
	CFCF	12	Do.
Columbia	WRGB	6	Albany-Schenectady-Troy.
	WTEN +	10	Do.
	WAST	13	Do.
Cortland	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Delaware	WNBF	12	Binghamton.
	WRGB	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
	WKTV	2	Utica.
Dutchess	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WTEN+	10	Albany-Schenectady-Troy.
Erie	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WUTV	29	Do.
Essex	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
Franklin	WCAX	3	Do.
	WPTZ	5	Do.
	CBOT	4	Canada.
	CBMT	6	Do.
	CJSS	8	Do.
	CFCF	12	Do.
Fulton	WRGB	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
	WAST	13	Do.
Genesee	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
Greene	WRGB	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
	WAST	13	Do.
Hamilton	WRGB	6	Do.
	WTEN+	10	Do.
Herkimer	WKTV	2	Utica.
	WRBG	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
	WHEN	5	Syracuse.
	WNYS	9	Do.
Jefferson	WWNY	7	Watertown-Carthage.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	CKWS	11	Canada.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	NEW YORK—continued		
Kings	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Lewis	WWNY	7	Watertown-Carthage.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	WKTV	2	Utica.
Livingston	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
	WGR	2	Buffalo.
Madison	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WKTV	2	Utica.
Monroe	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
Montgomery	WRGB	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
	WAST	13	Do.
	WKTV	2	Utica.
Nassau	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
New York	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Niagara	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WUTV	29	Do.
	CBLT	6	Canada.
	CFTO	9	Do.
	CHCH	11	Do.
Oneida East	WKTV	2	Utica.
	WUTR	20	Do.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Oneida West	WSYR	3	Do.
	WHEN	5	Do.
	WNYS	9	Do.
	WKTV	2	Utica.
Onondaga	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Ontario	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Orange	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Orleans	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WUTV	29	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	NEW YORK—continued		
Oswego	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Otsego	WKTV	2	Utica.
	WRGB	6	Albany-Schenectady-Troy.
	WNBF	12	Binghamton.
	WHEN	5	Syracuse.
	WNYS	9	Do.
Putnam	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Queens	WCBS	2	Do.
	WNBC	4	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WNEW	5	Do.
Rensselaer	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.
Richmond	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Rockland	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
St. Lawrence	WWNY	7	Watertown-Carthage.
	WPTZ	5	Burlington-Plattsburgh
	CBOT	4	Canada.
	CJSS	8	Do.
	CKWS	11	Do.
Saratoga	WRGB	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
	WAST	13	Do.
Schenectady	WRGB	6	Do.
	WTEN+	10	Do.
	WAST	13	Do.
Schoharie	WRGB	6	Do.
	WTEN+	10	Do.
	WAST	13	Do.
Schuyler	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
Seneca	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
Steuben	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WNBF	12	Binghamton.
	WBEN	4	Buffalo.
	WKBW	7	Do.
	WSYE	18	Elmira.
Suffolk East	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

NEW YORK—continued

County	Call letters, channel number, and market name		
Suffolk West	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Sullivan	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Tioga	WNBF	12	Binghamton.
	WBJA	34	Do.
	WINR	40	Do.
Tompkins	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WNBF	12	Binghamton.
Ulster	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WRGB	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
Warren	WRCB	6	Do.
	WTEN+	10	Do.
	WAST	13	Do.
Washington	WRGB	6	Do.
	WTEN+	10	Do.
	WAST	13	Do.
Wayne	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Westchester	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Wyoming	WER	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
Yates	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.

Census County Divisions in Split Counties

Oneida West:
Annsville, Ava, Boonville, Camden, Florence, Forest port, Lee, Rome City, Vernon, Verona, Vienna, Western, Sherrill.
Oneida East: All other.
Suffolk West: Babylon, Huntington, Islip, Smithtown.
Suffolk East: All other.

NORTH CAROLINA

County	Call letters, channel number, and market name		
Alamance	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Alexander	WBTV	3	Charlotte.
	WSOC	9	Do.
	WRET	36	Do.
	WGHP	8	Greensboro-Winston-Salem-High Point.
	WSJS	12	Do.
Alleghany	WFMY	2	Do.
	WGHP	8	Do.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Anson	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WBTW	13	Florence, S.C.
	WGHP	8	Greensboro-Winston-Salem-High Point.
Ashe	WBTV	3	Charlotte.
	WCYB	5	Bristol-Kingsport-Johnson City.
	WGHP	8	Greensboro-Winston-Salem-High Point.
Avery	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
Beaufort	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Bertie	WITN	7	Do.
	WNCT	9	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Bladen	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Brunswick	WWAY	3	Do.
	WECT	6	Do.
Buncombe	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Burke	WBTV	3	Charlotte.
	WSOC	9	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Cabarrus	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
aldwell	WBTV	3	Do.
	WSOC	9	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Camden	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Carteret	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

NORTH CAROLINA—continued

County	Call letters, channel number, and market name		
Caswell	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WRAL	5	Raleigh-Durham.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Catawba	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WSPA	7	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
Chatham	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
Cherokee	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
Chowan	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Norfolk-Portsmouth-Newport News.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Clay	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Cleveland	WBTV	3	Charlotte
	WSOC	9	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Columbus	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
	WBTW	13	Florence, S.C.
Craven	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Cumberland	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WECT	6	Wilmington, N.C.
Currituck	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Dare	WTAR	3	Do.
	WAVY	10	Do.
	WVEC	13	Do.
	WITN	7	Greenville-NewBern-Washington.
Davidson	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Davie	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Duplin	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Durham	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
	WFMY	2	Greensboro-Winston-Salem-High Point.
Edgecombe	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Forsyth	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Franklin	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WNCT	9	Greenville-New Bern-Washington.
Gaston	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
Gates	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Graham	WATE	6	Knoxville.
	WBIR	10	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
Granville	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
Greene	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Guilford	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Halifax	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Harnett	WRAL	5	Do.
	WTVD	11	Do.
	WECT	6	Wilmington, N.C.
Haywood	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Henderson	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

NORTH CAROLINA—continued

County	Call letters, channel number, and market name		
Hertford	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Hoke	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WBTW	13	Florence, S.C.
	WGHP	8	Greensboro-Winston-Salem-High Point.
	WECT	6	Wilmington, N.C.
Hyde	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Iredell	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WGHP	8	Greensboro-Winston-Salem-HighP oint.
	WSJS	12	Do.
Jackson	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Johnston	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Jones	WITN	7	Do.
	WNCT	9	Do.
	WCTI	12	Do.
Lee	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
Lenoir	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
	WRAL	5	Raleigh-Durham.
Lincoln	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WSPA	7	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
McDowell	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
Macon	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WSB	2	Atlanta.
Madison	WFBC	4	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
Martin	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Mecklenburg	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
Mitchell	WBTV	3	Charlotte.
	WCYB	5	Bristol-Kingsport-Johnson City.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Montgomery	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Moore	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WECT	6	Wilmington, N.C.
Nash	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
New Hanover	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Northampton	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Onslow	WITN	7	Do.
	WNCT	9	Do.
	WCTI	12	Do.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Orange	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
Pamlico	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Pasquotank	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WYAH	27	Do.
Pender	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Perquimans	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Person	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Pitt	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
	WRAL	5	Raleigh-Durham.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	NORTH CAROLINA—continued		
Polk	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
Randolph	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Richmond	WBTV	3	Charlotte.
	WSOC	9	Do.
	WBTW	13	Florence, S.C.
	WGHP	8	Greensboro-Winston-Salem-High Point.
Robeson	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
	WBTW	13	Florence, S.C.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Rockingham	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WDBJ	7	Roanoke-Lychburg.
	WSLS	10	Do.
Rowan	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Rutherford	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Sampson	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Scotland	WBTW	13	Florence, S.C.
	WGHP	8	Greensboro-Winston. Salem-High Point.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WECT	6	Willmington, N.C.
Stanly	WBTV	3	Charlotte.
	WSOC	9	Do.
	WGHP	8	Greensboro-Winston-Salem-High Point.
Stokes	WFMY	2	Do.
	WGHP	8	Do.
	WSJS	12	Do.
Surry	WFMY	2	Do.
	WGHP	8	Do.
	WSJS	12	Do.
Swain	WFBC	4	Greenville-Spartanburg-Ashville.
	WSPA	7	Do.
	WLOS	13	Do.
Transylvania	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	NORTH CAROLINA—continued		
Tyrrell	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Union	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
Vance	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Wake	WRAL	5	Do.
	WTVD	11	Do.
Warren	WRAL	5	Do.
	WTVD	11	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Washington	WITN	7	Do.
	WNCT	9	Do.
	WCTI	12	Do.
Watauga	WBTV	3	Charlotte.
	WCYB	5	Bristol-Kingsport-Johnson City.
	WGHP	8	Greensboro-Winston-Salem-High Point.
Wayne	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Wilkes	WGHP	8	Greensboro-Winston-Salem-High Point.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Wilson	WITN	7	Greenville-Winston-Salem-High Point.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Yadkin	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Yancey	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
	NORTH DAKOTA		
Adams	KDIX	2	Dickinson, N. Dak.
	KFYR	5	Minot-Bismarck.
Barnes	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Benson	KXJB	4	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
	KXMC	13	Minot-Bismarck.
Billings	KDIX	2	Dickinson, N. Dak.
	KFYR	5	Minot-Bismarck.
Bottineau	KMOT	10	Do.
	KXMC	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	NORTH DAKOTA—continued		
Bowman	KDIX	2	Dickinson, N. Dak.
	KFYR	5	Minot-Bismarck.
	KOTA+	3	Rapid City.
Burke	KUMV	8	Minot-Bismarck.
	KMOT	10	Do.
	KXMC	13	Do.
	CKOS	3	Canada.
Burleigh	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Cass	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Cavalier	WDAZ	8	Do.
	KCND	12	Pembina.
	CJAY	7	Canada.
Dickey	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Divide	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.
Dunn	KDIX	2	Dickinson, N. Dak.
	KFYR	5	Minot-Bismarck.
	KUMV	8	Do.
Eddy	KXJB	4	Fargo.
	WDAZ	8	Do.
	KTHI	11	Do.
Emmons	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Foster	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
Golden Valley	KUMV	8	Minot-Bismarck.
	KDIX	2	Dickinson, N. Dak.
Grand Forks*	KXJB	4	Fargo.
	WDA	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
Grant	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Griggs	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
Hettinger	KFYR	5	Minot-Bismarck.
	KDIX	2	Dickinson, N. Dak.
Kidder	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
La Moure	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Logan	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
McHenry	KMOT	10	Do.
	KXMC	13	Do.
McIntosh	KFYR	5	Do.
	KXMB	12	Do.
McKenzie	KUMV	8	Do.
	KXMD	11	Do.
McLean	KFYR	5	Do.
	KXMB	12	Do.
	KXMC	13	Do.
Mercer	KFYR	5	Do.
	KXMC	13	Do.
Morton East	KFYR	5	Do.
	KXMB	12	Do.
Morton West	KFYR	5	Do.
	KXMB	12	Do.
Mountrail	KUMV	8	Do.
	KMOT	10	Do.
	KXMC	13	Do.
Nelson	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	NORTH DAKOTA—continued		
Oliver	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Pembina	KCND	12	Pembina.
	KXJB	4	Fargo.
	WDAZ	8	Do.
	CBWT	6	Canada.
	CJAY	7	Do.
Pierce	KMOT	10	Minot-Bismarck.
	KXMC	13	Do.
Ramsey	KXJB	4	Fargo.
	WDAZ	8	Do.
	KTHI	11	Do.
Ransom	KXJB	4	Do.
	WDAY	6	Do.
	KTHI	11	Do.
Renville	KMOT	10	Minot-Bismarck.
	KXMC	13	Do.
Richland*	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Rolette	KMOT	10	Minot-Bismarck.
	KXMC	13	Do.
	CKX	5	Canada.
Sargent	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Sheridan	KFYR	5	Minot-Bismarck.
	KXMC	13	Do.
Sioux	KFYR	5	Do.
	KXMB	12	Do.
Slope	KDIX	2	Dickinson, N. Dak.
Stark	KDIX	2	Do.
	KFYR	5	Minot-Bismarck.
Steele	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Stutsman	KXJB	4	Do.
	WDAY	6	Do.
	KTHI	11	Do.
	KFYR	5	Minot-Bismarck.
Towner	KXJB	4	Fargo.
	WDAZ	8	Do.
Traill	KXJB	4	Do.
	WDAY	6	Do.
	KTHI	11	Do.
Walsh	KXJB	4	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
	KCND	12	Pembina.
Ward	KMOT	10	Minot-Bismarck.
	KXMC	13	Do.
Wells	KFYR	5	Do.
	KXMC	13	Do.
	KXJB	4	Fargo.
	WDAZ	8	Do.
	KTHI	11	Do.
Williams	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.

Census County Divisions in Split Counties

Morton East: Mandan, Mandan North, Mandan South.
Morton West: All other.

County	Call letters, channel number, and market name		
	OHIO		
Adams	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Allen	WIMA	35	Lima.
	WHIO	7	Dayton.
	WANE	15	Fort Wayne.
	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
OHIO—continued			
Ashland	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Ashtabula	WKYC	3	Do.
	WEWS	5	Do.
	WJW	8	Do.
	WICU	12	Erie.
	WJET	24	Do.
	WSEE	35	Do.
Athens	WSAZ	3	Charleston-Huntington.
	8		
	WCHS	8	Do.
	WHTN	13	Do.
	WLWC	4	Columbus, Ohio.
Auglaize	WLWD	2	Dayton.
	WHIO	7	Do.
	WIMA	35	Lima.
Belmont	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Brown	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Butler	WLWT	5	Do.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
Carroll	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Champaign	WLWD	2	Dayton.
	WHIO	7	Do.
	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Clark	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Clermont	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Clinton	WLWT	5	Do.
	WCPO	9	Do.
	WKRC	12	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
Columbiana	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
Coshocton	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WTRF	7	Wheeling-Steubenville
	WSTV	9	Do.
	WHIZ	18	Zanesville.
Crawford	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
Cuyahoga	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Darke	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WCPO	9	Cincinnati.
Defiance	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Delaware	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Erie	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
Fairfield	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Fayette	WLWC	4	Do.
	WTVN	6	Do.
	WBNS	10	Do.
	WHIO	7	Dayton.
Franklin	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Fulton	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Gallia	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Geauga	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Greene	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WCPO	9	Cincinnati.
	WKRC	12	Do.
Guernsey	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Hamilton	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Hancock	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	OHIO—continued		
Hardin	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
Harrison	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Henry	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Highland	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WHIO	7	Dayton.
Hocking	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Holmes	WKYC	3	Cleveland
	WEWS	5	Do.
	WJW	8	Do.
Huron	WKYC	3	Do.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
Jackson	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Jefferson	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Knox	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Lake	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Lawrence	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Licking	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Logan	WLWC	4	Do.
	WTVN	6	Do.
	WBNS	10	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
Lorain	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Lucas*	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WJBK	2	Detroit.
	WXYZ	7	Do.
Madison	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Mahoning	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
Marion	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Medina	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Meigs	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Mercer	WLWD	2	Dayton.
	WHIO	7	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
	WIMA	35	Lima.
Miami	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WKTR	16	Kettering (Dayton).
Monroe	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	WDTV	5	Clarksburg-Weston.
	WTAE	4	Pittsburgh.
Montgomery	WLWD	2	Dayton.
	WHIO	7	Do.
	WKTR	16	Do.
	WKEF	22	Do.
	WCPO	9	Cincinnati.
	WKRC	12	Do.
Morgan	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WTAP	15	Parkersburg.
	WHIZ	18	Zanesville.
Morrow	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Muskingum	WHIZ	18	Zanesville.
	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Noble	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Ottawa	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WEWS	5	Cleveland.
	WJBK	2	Detroit.
Paulding	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Perry	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WHIZ	18	Zanesville.
Pickaway	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Pike	WLWC	4	Do.
	WTVN	6	Do.
	WBNS	10	Do.
	WSAZ	3	Charleston-Huntington.
	WHTN	13	Do.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

OHIO—continued

County	Call letters, channel number, and market name		
Preble	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Putnam	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WIMA	35	Lima.
Richland	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WBNS	10	Columbus, Ohio.
Ross	WLWC	4	Do.
	WTVN	6	Do.
	WBNS	10	Do.
Sandusky	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Scioto	WSAZ	3	Charleston-Huntington
	WCHS	8	Do.
	WHTN	13	Do.
Seneca	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WEWS	5	Cleveland.
Shelby	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
Stark	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Summit	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
	WAKR	23	Akron.
Trumbull	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
Tuscarawas	WKYC	3	Do.
	WEWS	5	Do.
	WJW	8	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Union	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Van Wert	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
	WIMA	35	Lima.
Vinton	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Warren	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

OHIO—continued

County	Call letters, channel number, and market name		
Washington	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WTAP	15	Parkersburg.
	WTRF	7	Wheeling-Steubenville.
Wayne	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Williams	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Wood	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WKBD	50	Detroit.
Wyandot	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WLWC	4	Columbus, Ohio.
	WBNS	10	Do.

OKLAHOMA

County	Call letters, channel number, and market name		
Adair	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Alfalfa	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Atoka	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
Beaver	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Beckham	KFDA+	10	Amarillo.
	KSWO	7	Wichita Falls-Lawton.
Blaine	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Bryan	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
	KDFW	4	Dallas-Fort Worth.
	WFAA	8	Do.
	KTVT	11	Do.
Caddo	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Canadian	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
Carter	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
	KWTV	9	Oklahoma City.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
Cherokee	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Choctaw	KTVT	11	Dallas-Fort Worth.
	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
Cimarron	KGNC	4	Amarillo.
	KVII	7	Do.
	KDFA+	10	Do.
Cleveland	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	OKLAHOMA—continued		
Coal	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
	WKY	4	Oklahoma City.
Comanche	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Cotton	KFDX	3	Do.
	KAUZ	6	Do.
	KSWO	7	Do.
Craig	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KOAM	7	Joplin-Pittsburg.
Creek	KTEM	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Custer	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Delaware	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Dewey	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTX	9	Do.
Ellis	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
	KGNC	4	Amarillo.
	KFDA+	10	Do.
Garfield	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Garvin	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEN	10	Ardmore-Ada.
Grady	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Grant	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
Greer	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	KFDA+	10	Amarillo.
Harmon	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Harper	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTVC	6	Wichita-Hutchinson.
	KUPK	13	Do.
Haskell*	KTUL	8	Tulsa.
	KFSA	5	Fort Smith.
Hughes	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEN	10	Ardmore-Ada.
	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Jackson	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Jefferson	KFDX	3	Do.
	KAUZ	6	Do.
	KSWO	7	Do.
	KXII	12	Ardmore-Ada.
Johnston	KTEN	10	Do.
	KXII	12	Do.
Kay	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEW	2	Tulsa.
	KOTV	6	Do.
	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
Kingfisher	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Kiowa	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	WKY	4	Oklahoma City.
	KOCO	5	Do.
Latimer	KTUL	8	Tulsa.
	KTEN	10	Ardmore-Ada.
	KFSA	5	Fort Smith.
Le Flore	KFSA	5	Do.
	KTUL	8	Tulsa.
Lincoln	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Logan	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
Love	KDFW	4	Dallas-Fort Worth.
	WFAA	8	Do.
	KTVT	11	Do.
	KXII	12	Ardmore-Ada.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
McClain	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
McCurtain	KTBS	3	Shreveport-Texarkana.
	KTAL	12	Do.
	KSFA	5	Fort Smith.
McIntosh	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Major	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Marshall	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
	KDFW	4	Dallas-Fort Worth.
Mayes	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Murray	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
Muskogee	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Noble	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Nowata	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Okfuskee	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
	KTEN	10	Ardmore-Ada.
	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Oklahoma	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
OKLAHOMA—continued			
Okmulgee	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Osage	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
Ottawa	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
	KOTV	6	Tulsa.
	KTUL	8	Do.
Pawnee	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
Payne	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEW	2	Tulsa.
	KOTV	6	Do.
Pittsburg	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
	KTEN	10	Ardmore-Ada.
Pontotoc	KTEN	10	Do.
	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Pottawatomie	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
Pushmataha	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
Roger Mills	KFDA+	10	Amarillo.
	WKY	4	Oklahoma City.
Rogers	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Seminole	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEN	10	Ardmore-Ada.
Sequoyah	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KSFA	5	Fort Smith.
Stephens	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Texas	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Tillman	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Tulsa	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Wagoner	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
Washington	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
Washita	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Woods	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Woodward	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
OREGON			
Baker	KBOI	2	Boise.
	KTVB+	7	Do.
Benton	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KPTV	12	Do.
	KEZI	9	Eugene.
	KVAL	13	Do.
Clackamas	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Clatsop	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KING	5	Seattle-Tacoma.
Columbia	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Coos	KCBY	11	Eugene.
	KOBI	5	Medford.
Crook	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KEZI	9	Eugene.
Curry	KIEM	3	Eureka.
	KVIQ	6	Do.
Deschutes	NA.		
Douglas	KPIC	4	Eugene.
	KEZI	9	Do.
	KOBI	5	Medford.
Gilliam	KEPR	19	Yakima.
	KNDU	25	Do.
	KOIN	6	Portland, Oreg.
	KGW	8	Do.
	KPTV	12	Do.
Grant	KBOI	2	Boise.
	KTVB+	7	Do.
Harney	NA.		
Hood River	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Jackson	KOBI	5	Medford.
	KMED	10	Do.
Jefferson	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
Josephine	KOBI	5	Medford.
	KMED	10	Do.
Klamath	KOTI	2	Klamath Falls.
	KMED	10	Medford.
Lake	KOTI	2	Klamath Falls.
Lane Inner	KEZI	9	Eugene.
	KVAL	13	Do.
Lane Outer*	KEZI	9	Do.
	KVAL	13	Do.
	KOIN	6	Portland, Oreg.
Lincoln	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KEZI	9	Eugene.
	KVDO	3	Salem, Oreg.
Linn	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KEZI	9	Eugene.
	KVAL	13	Do.
	KVDO	3	Salem, Oreg.
Malheur	KBOI	2	Boise.
	KTVB+	7	Do:

SIGNIFICANTLY VIEWED SIGNALS—Continued

OREGON—continued

County	Call letters, channel number, and market name		
Marion	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KVDO	13	Salem, Oreg.
Morrow	KEPR	19	Yakima.
	KNDU	25	Do.
	KVEW	42	Do.
	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
Multnomah	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Polk	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KVDO	3	Salem, Oreg.
Sherman	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Tillamook	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KVDO	3	Salem, Oreg.
Umatilla	KEPR	19	Yakima.
	KNDU	25	Do.
	KVEW	42	Do.
Union	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KTVB+	7	Boise.
Wallowa	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Wasco	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Washington	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Yamhill	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KVDO	3	Salem, Oreg.
Wheeler	NA.		

Census County Divisions in Split Counties

Lane Inner: Eugene, Springfield, Eugene West.
Lane Outer: All other.

PENNSYLVANIA

County	Call letters, channel number, and market name		
Adams	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
Allegheny	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
Armstrong	KDKA	2	Do.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WJAC	6	Johnstown-Altoona.
Beaver	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WSTV	9	Wheeling-Steubenville.
Bedford	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Berks	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WKBS	48	Do.
	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
Blair	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Bradford	WNBF	12	Binghamton.
	WSYE	18	Elmira.
	WENY	36	Do.
Bucks	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Butler	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WJAC	6	Johnstown-Altoona.
Cambria	WJAC	6	Do.
	WFBG	10	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Cameron	NA.		
Carbon	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WNEP	16	Wilkes-Barre-Scranton.
Centre	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Chester	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Clarion	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WJAC	6	Johnstown-Altoona.
Clearfield	WJAC	6	Do.
	WFBG	10	Do.
Clinton*	WFBG	10	Do.
Columbia	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Crawford	WICU	12	Erie.
	WJET	24	Do.
	WSEE	35	Do.
Cumberland	WGAL	8	Harrisburg—York-Lancaster-Lebanon.
	WHP	21	Do.
	WTPA	27	Do.
Dauphin	WGAL	8	Do.
	WHP	21	Do.
	WTPA	27	Do.
Delaware	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Elk	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
PENNSYLVANIA—continued			
Erie	WICU	12	Erie.
	WJET	24	Do.
	WSEE	35	Do.
Fayette	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Forest	WICU	12	Erie.
	WJAC	6	Johnstown-Altoona.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Franklin	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WGAL	8	Harrisburg—York-Lancaster-Lebanon.
Fulton	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Greene	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WTRF	7	Wheeling-Steubenville
Huntingdon	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Indiana	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Jefferson	WJAC	6	Do.
	WFBG	10	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Juniata	WGAL	8	Harrisburg—York-Lancaster-Lebanon.
	WHP	21	Do.
	WTPA	27	Do.
	WFBG	10	Johnstown-Altoona.
Lackawanna	WNEP	16	Wilkes-Barre-Scranton
	WDAU	22	Do.
	WBRE	28	Do.
Lancaster	WGAL	8	Harrisburg—York-Lancaster-Lebanon.
	WLYH	15	Do.
	WTPA	27	Do.
	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
Lawrence	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
Lebanon	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WLYH	15	Do.
	WHP	21	Do.
	WTPA	27	Do.
Lehigh	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
Luzerne	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
PENNSYLVANIA—continued			
Lycoming	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
	WFBG	10	Johnstown-Altoona.
McKean	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Mercer	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
	KDKA	2	Pittsburgh.
	WIIC	11	Do.
Mifflin	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Monroe	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
Montgomery	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Montour	Over 90 percent cable penetration.		
Northampton	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WNEW	5	New York.
	WOR	9	Do.
	WPIX	11	Do.
Northumberland	Over 90 percent cable penetration.		
Perry	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WHP	21	Do.
	.WTPA	27	Do.
Philadelphia	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Pike	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Potter	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Schuylkill	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
Snyder	WGAL	8	Do.
	WHP	21	Do.
	WTPA	27	Do.
	WNEP	16	Wilkes-Barre-Scranton.
	WBRE	28	Do.
Somerset	WJAC	6	Johnstown-Altoona.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Sullivan	WNBF	12	Binghamton.
	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

PENNSYLVANIA—continued

County	Call letters, channel number, and market name		
Susquehanna	WNBF	12	Binghamton.
	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Tioga	WSYE	18	Elmira.
	WENY	36	Do.
	WNBF	12	Binghamton.
Union	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Venango	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WICU	12	Erie.
	WJAC	6	Johnstown-Altoona.
Warren	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WICU	12	Erie.
Washington	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Wayne	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
	WNBF	12	Binghamton.
	WNBC	4	New York.
	WNEW	5	Do.
Westmoreland	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WJAC	6	Johnstown-Altoona.
Wyoming	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
York	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WTPA	27	Do.
	WSBA	43	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.

RHODE ISLAND

County	Call letters, channel number, and market name		
Bristol	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WNAC	7	Do.
	WSBK	38	Do.
Kent	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WHDH	5	Boston.
	WNAC	7	Do.
	WSBK	38	Do.
Newport	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WNAC	7	Boston.
	WSBK	38	Do.
	WKBG	56	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

RHODE ISLAND—continued

County	Call letters, channel number, and market name		
Providence	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Washington*	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.

SOUTH CAROLINA

County	Call letters, channel number, and market name		
Abbeville	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WJBF	6	Augusta.
Aiken*	WJBF	6	Do.
	WRDW	12	Do.
Allendale	WJBF	6	Do.
	WRDW	12	Do.
Anderson	WFBC	4	Greenville-Spartanburg-Ashville.
	WSPA	7	Do.
	WLOS	13	Do.
Bamberg	WJBF	6	Augusta.
	WRDW	12	Do.
	WCSC	5	Charleston, S.C.
	WIS	10	Columbia, S.C.
Barnwell	WJBF	6	Augusta.
	WRDW	12	Do.
	WIS	10	Columbia, S.C.
Beaufort	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
	WSAV	3	Savannah.
	WTOC	11	Do.
Berkeley	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Calhoun	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WRDW	12	Augusta.
	WUSN	2	Charleston, S.C.
	WCSC	5	Do.
Charleston	WUSN	2	Do.
	WCIV	4	Do.
	WCSC	5	Do.
Cherokee	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Chester	WBTV	3	Do.
	WSOC	9	Do.
	WIS	10	Columbia, S.C.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Chesterfield	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WIS	10	Columbia, S.C.
	WBTW	13	Florence, S.C.
Clarendon	WIS	10	Columbia, S.C.
	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
	WBTW	13	Florence, S.C.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	SOUTH CAROLINA—continued		
Colleton	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Darlington	WBTW	13	Florence, S.C.
	WIS	10	Columbia, S.C.
Dillon*	WBTW	13	Florence, S.C.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Dorchester	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Edgefield	WJBF	6	Augusta.
	WRDW	12	Do.
Fairfield	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
	WSPA	7	Greenville-Spartanburg-Asheville.
Florence	WBTW	13	Florence, S.C.
	WIS	10	Columbia, S.C.
Georgetown	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Greenville	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Greenwood	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.
	WJBF	6	Augusta.
Hampton	WJBF	6	Do.
	WRDW	12	Do.
	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
	WSAV	3	Savannah.
	WTOC	11	Do.
Horry	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
	WCSC	5	Charleston, S.C.
	WBTW	13	Florence, S.C.
Jasper	WSAV	3	Savannah.
	WTOC	11	Do.
	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Kershaw	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
	WBTW	13	Florence, S.C.
Lancaster	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WIS	10	Columbia, S.C.
Laurens	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Lee	WIS	10	Columbia, S.C.
	WBTW	13	Florence, S.C.
Lexington	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
McCormick	WJBF	6	Augusta.
	WRDW	12	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
Marion	WBTW	13	Florence, S.C.
	WIS	10	Columbia, S.C.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Marlboro	WBTW	13	Florence, S.C.
	WIS	10	Columbia, S.C.
	WECT	6	Wilmington, N.C.
Newberry	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WJBF	6	Augusta.
	WIS	10	Columbia, S.C.
Oconee	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Orangeburg	WIS	10	Columbia., S.C.
	WJBF	6	Augusta.
	WRDW	12	Do.
	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Pickens	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Richland	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
Saluda	WJBF	6	Augusta.
	WRDW	12	Do.
	WIS	10	Columbia, S.C.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
Spartanburg	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
Sumter	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
	WBTW	13	Florence, S.C.
Union	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
Williamsburg	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
	WIS	10	Columbia, S.C.
	WBTW	13	Florence, S.C.
York*	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WSPA	7	Greenville-Spartanburg-Asheville.
	SOUTH DAKOTA		
Aurora	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
Beadle	KORN	5	Do.
	KELO+	11	Do.
	KSOO+	13	Do.
Bennett	KOTA	3	Rapid City.
	KDUH	4	Do.
Bon Homme	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	SOUTH DAKOTA—continued		
Brookings	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
Brown	KELO+	11	Do.
	KSOO+	13	Do.
Brule	KORN	5	Do.
	KELO+	11	Do.
Buffalo	KORN	5	Do.
	KELO+	11	Do.
Butte	KOTA+	3	Rapid City.
	KRSD+	7	Do.
Campbell	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Charles Mix	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
Clark	KELO+	11	Do.
	KSOO+	13	Do.
Clay	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Codington	KELO+	11	Do.
	KSOO+	13	Do.
Corson	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Custer	KOTA+	3	Rapid City.
	KRSD+	7	Do.
Davison	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
Day	KELO+	11	Do.
	KSOO+	13	Do.
Deuel	KELO+	11	Do.
	KSOO+	13	Do.
Dewey	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
	KELO	11	Sioux Falls-Mitchell.
Douglas	KORN	5	Do.
	KELO+	11	Do.
Edmunds	KELO+	11	Do.
	KSOO+	13	Do.
Fall River	KOTA+	3	Rapid City.
	KDUH	4	Do.
	KSTF	10	Cheyenne.
Faulk	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Grant*	KELO+	11	Do.
	KCMT	7	Alexandria, Minn.
Gregory	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
Haakon	KOTA+	3	Rapid City.
	KELO+	11	Sioux Falls-Mitchell.
Hamlin	KELO+	11	Do.
	KSOO+	13	Do.
Hand	KELO+	11	Do.
	KSOO+	13	Do.
Hanson	KORN	5	Do.
	KELO+	11	Do.
	KSOO+	13	Do.
Harding	KOTA+	3	Rapid City.
Hughes	KELO+	11	Sioux Falls-Mitchell.
Hutchinson	KORN	5	Do.
	KELO+	11	Do.
	KSOO+	13	Do.
Hyde	KELO+	11	Do.
	KSOO+	13	Do.
Jackson	KOTA+	3	Rapid City.
	KELO+	11	Sioux Falls-Mitchell.
Jerauld	KORN	5	Do.
	KELO+	11	Do.
	KSOO+	13	Do.
Jones	KELO+	11	Do.
Kingsbury	KORN	5	Do.
	KELO+	11	Do.
	KSOO+	13	Do.
Lake	KORM	5	Sioux Falls-Mitchell,
	KELO+	11	Do.
	KSOO+	13	Do.
Lawrence	KOTA+	3	Rapid City.
	KRSD+	7	Do.
Lincoln	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Lyman	KELO+	11	Sioux Falls-Mitchell.
McCook	KORN	5	Do.
	KELO+	11	Do.
	KSOO+	13	Do.
McPherson	KELO+	11	Do.
	KSOO+	13	Do.
	KFYR	5	Minot-Bismarck.
Marshall	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
	KXJB	4	Fargo.
Meade*	KOTA+	3	Rapid City.
	KRSD+	7	Do.
Mellette	KELO+	11	Sioux Falls-Mitchell.
Miner	KORN	5	Do.
	KELO+	11	Do.
	KSOO+	13	Do.
Minnehaha	KORN	5	Do.
	KELO+	11	Do.
	KSOO+	13	Do.
	KCAU	9	Sioux City.
Moody	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
Pennington	KOTA+	3	Rapid City.
	KRSD+	7	Do.
Perkins	KFYR	5	Minot-Bismarck.
	KDIX	2	Dickinson, N. Dak.
	KOTA+	3	Rapid City.
Potter	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
	KFYR	5	Minot-Bismarck.
Roberts	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
	WDAY	6	Fargo.
Sanborn	KORN	5	Sioux Falls-Mitchell.
	KELO+	11	Do.
	KSOO+	13	Do.
Shannon	KOTA+	3	Rapid City.
	KDUH	4	Do.
	KRSD+	7	Do.
Spink	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Stanley*	KELO+	11	Do.
Sully	KELO+	11	Do.
Todd	KELO+	11	Do.
Tripp	KORN	5	Do.
	KELO+	11	Do.
Turner	KORN	5	Do.
	KELO+	11	Do.
	KSOO+	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Union	KTIV	4	Do.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO+	13	Do.
Walworth	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
	KELO+	11	Sioux Falls-Mitchell.
Washabaugh	KOTA+	3	Rapid City.
	KELO+	11	Sioux Falls-Mitchell.
Yankton	KTIV	4	Sioux City.
	KCAU	9	Do.
	KELO+	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Ziebach	KOTA+	3	Rapid City.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
			TENNESSEE
Anderson	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Bedford	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Benton	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Bledsoe	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Blount	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Bradley	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Campbell	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Cannon	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Carroll	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
	WBBJ	7	Jackson, Tenn.
	WREC	3	Memphis.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
Carter	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WKPT	19	Do.
Cheatham	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Chester	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Claiborne	WATE	6	Knoxville.
	WBIR	10	Do.
Clay	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Cocke	WATE	6	Knoxville.
	WBIR	10	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
Coffee	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Crockett	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Cumberland	WATE	6	Knoxville.
	WBIR	10	Do.
	WIVC	9	Chattanooga.
Davidson	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Decatur	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
	WBBJ	7	Jackson, Tenn.
De Kalb	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Dickson	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
			TENNESSEE—continued
Dyer	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Fayette	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Fentress	WATE	6	Knoxville.
	WBIR	10	Do.
Franklin	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WTVC	9	Chattanooga.
	WDEF	12	Do.
Gibson	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Giles	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Grainger	WATE	6	Knoxville.
	WBIR	10	Do.
Greene	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
	WATE	6	Knoxville.
	WBIR	10	Do.
Grundy	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Hamblen	WATE	6	Knoxville.
	WBIR	10	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
	WLOS	13	Greenville-Spartanburg-Asheville.
Hamilton	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Hancock	WATE	6	Knoxville.
	WBIR	10	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
Hardeman	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Hardin	WBBJ	7	Jackson, Tenn.
	WREC	3	Memphis.
	WMC	5	Do.
Hawkins	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
	WATE	6	Knoxville.
	WBIR	10	Do.
Haywood	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Henderson	WBBJ	7	Do.
	WREC	3	Memphis.
	WMC	5	Do.
	WSM	4	Nashville.
	WLAC	5	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
TENNESSEE—continued			
Henry	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
Hickman	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Houston	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Humphreys	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Jackson	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Jefferson	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
Johnson	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Knox	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Lake	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Lauderdale	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Lawrence	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
Lewis	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Lincoln	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Loudon	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
McMinn	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WATE	6	Knoxville.
McNairy	WREC	3	Memphis.
	WMC	5	Do.
	WHVQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Macon	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Madison	WBBJ	7	Jackson, Tenn.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Marion	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Marshall	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Maury	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Meigs	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Monroe	WATE	6	Knoxville.
	WBIR	10	Do.
	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Montgomery	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Moore	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Morgan	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVC	9	Chattanooga.
Obion	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	WBBJ	7	Jackson, Tenn.
Overton	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Perry	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Pickett	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Polk	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WATL	36	Atlanta.
Putnam	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Rhea	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Roane	WATE	6	Knoxville.
	WBIR	10	Do.
	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Robertson	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Rutherford	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Scott*	WATE	6	Knoxville.
	WBIR	10	Do.
Sequatchie	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Sevier	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Shelby	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Smith	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Stewart	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

TENNESSEE—continued

County	Call letters, channel number, and market name		
Sullivan	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WKPT	19	Do.
Sumner	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Tipton	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Trousdale	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Unicoi	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Union	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Van Buren	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WRCB	3	Chattanooga.
	WDEF	12	Do.
Warren	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Washington	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WKPT	19	Do.
Wayne	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Weakley	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	WBBJ	7	Jackson, Tenn.
White	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Williamson	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Wilson	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.

TEXAS

County	Call letters, channel number, and market name		
Anderson	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Andrews	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Angelina	KTRE	9	Tyler.
Aransas	KIII+	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Archer	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Armstrong	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Atascosa	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Austin	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

TEXAS—continued

County	Call letters, channel number, and market name		
Bailey	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KFDA+	10	Amarillo.
Bandera	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Bastrop	KTBC	7	Austin, Tex.
	KHFI	42	Do.
	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Baylor	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Bee	KIII+	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Bell	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KTBC	7	Austin, Tex.
Bexar	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KWEX	41	Do.
Blanco	WOAI	4	Do.
	KENS	5	Do.
	KSAT	12	Do.
	KTBC	7	Austin, Tex.
	KHFI	42	Do.
Borden	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Bosque	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Bowie	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Brazoria	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Brazos	KBTX	3	Waco-Temple.
	KCEN	6	Do.
	KTVT	11	Dallas-Fort Worth.
Brewster	NA.		
Briscoe	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Brooks	KIII+	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Brown	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KTVT	11	Dallas-Fort Worth.
Burleson	KBTX	3	Waco-Temple.
	KCEN	6	Do.
	KTBC	7	Austin, Tex.
Burnet	KTBC	7	Do.
	KHFI	42	Do.
	KWTX	10	Waco-Temple.
Caldwell	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KTBC	7	Austin, Tex.
	KHFI	42	Do.
Calhoun	NA.		
Callahan	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
Cameron	KGBT	4	McAllen-Brownsville.
	KRGV	5	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

TEXAS—continued

County	Call letters, channel number and market name		
Camp	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KLTV	7	Tyler.
Carson	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Cass	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Castro	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
	KLBK	13	Lubbock.
Chambers	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Cherokee	KLTV	7	Tyler.
	KTRE	9	Do.
	KTBS	3	Shreveport-Texarkana.
Childress	NA.		
Clay	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Cochran	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Coke	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KCTV	8	San Angelo.
Coleman	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
Collin	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Collingsworth	KVII	7	Amarillo.
	KFDA+	10	Do.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Colorado	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
Comal	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Comanche	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KRBC+	9	Abilene-Sweetwater.
Concho	Over 90 percent cable penetration.		
Cooke	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Coryell	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KTVC	7	Austin, Tex.
	KTVT	11	Dallas-Fort Worth.
Cottle	Over 90 percent cable penetration.		
Crane	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Crockett	NA.		
Crosby	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Culberson	NA.		
Dallam	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Dallas	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Dawson	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KMXN	34	Do.
	KMID	2	Odessa-Midland.
Deaf Smith	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Delta	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Denton	KDFW	4	Do.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
DeWitt	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Dickens	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KTXS	12	Abilene-Sweetwater.
Dimmit	NA.		
Donley	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Duval	KIII+	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Eastland	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
Ector*	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Edwards	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Ellis	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
El Paso	KROD	4	El Paso.
	KTSM	9	Do.
	KELP+	13	Do.
Erath	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Falls	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Fannin	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KXII	12	Ardmore-Ada.
Fayette*	KTBC	7	Austin, Texas.
	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KENS	5	San Antonio.
	KSAT	12	Do.
Fisher*	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
		TEXAS—continued	
Floyd	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Foard	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Fort Bend	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Franklin	NA.		
Freestone	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Frio	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Gaines	KCBD+	11	Lubbock.
	KLBK	13	Do.
	WFAA	8	Dallas-Fort Worth.
	KTVT	11	Do.
	KDTV	39	Do.
Galveston	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Garza*	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Gillespie	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KTBC	7	Austin, Tex.
Glasscock	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Goliad	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Gonzales	WOAI	4	Do.
	KENS	5	Do.
	KSAT	12	Do.
Gray	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Grayson	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KXII	12	Ardmore-Ada.
Gregg	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KLTV	7	Tyler.
Grimes*	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KBTX	3	Waco-Temple.
Guadalupe	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Hale*	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Hall	Over 90 percent cable penetration.		
Hamilton	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Hansford	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Hardeman	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Hardin	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Harris	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Harrison	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Hartley	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Haskell	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KFDX	3	Wichita Falls-Lawton.
Hays	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KTBC	7	Austin, Tex.
Hemphill	Over 90 percent cable penetration.		
Henderson	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Hidalgo	KGVT	4	McAllen-Brownsville (Lwr R Grnd).
	KRGV	5	Do.
Hill	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KWTX	10	Waco-Temple.
Hockley*	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Hood	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Hopkins	KDFW	4	Do.
	WBAP	5	Do.
	WFAA	8	Do.
	KLVT	11	Do.
	KLTV	7	Tyler.
Houston	KTRE	9	Lufkin-Nacogdoches.
	KBTX	3	Waco-Temple.
Howard	KMID	2	Odessa-Midland.
	KWAB	4	Do.
	KOSA	7	Do.
	KMOM+	9	Do.
Hudspeth	KROD	4	El Paso.
	KTSM	9	Do.
	KELP+	13	Do.
Hunt	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Hutchinson	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Irion	KCTV	8	San Angelo.
	KRBC+	9	Abilene-Sweetwater.
Jack	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Jackson	KPRC	2	Houston:
	KHOU	11	Do.
	KTRK	13	Do.
	KHT	39	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
TEXAS—continued			
Jasper	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Jeff Davis	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Jefferson North	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Jefferson South	KJAC	4	Do.
	KFDM	6	Do.
	KBMT	12	Do.
Jim Hogg	KIII+	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Jim Wells	KIII+	3	Do.
	KRIS	6	Do.
	KZTV	10	Do.
Johnson	KDFW	4	Dallas-Forth Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Jones	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
Karnes	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Kaufman	KDFW	4	Dallas-Forth Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Kendall	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Kenedy	KIII+	3	Do.
	KRIS	6	Do.
	KZTV	10	Do.
Kent	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KTXS	12	Abilene-Sweetwater.
Kerr	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Kimble	WOAI	4	Do.
	KENS	5	Do.
	KSAT	12	Do.
King	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	KTXS	12	Abilene-Sweetwater.
Kinney	Over 90 percent cable penetration.		
Kleberg	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Knox	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	KTXS	12	Abilene-Sweetwater.
Lamar	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KXII	12	Ardmore-Ada.
Lamb	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Lampasas	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KTBC	7	Austin, Tex.
La Salle	NA.		
Lavaca	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KPRC	2	Houston.
Lee	KTBC	7	Austin, Tex.
	KHFI	42	Do.
	KBTX	3	Waco-Temple.
	KCEN	6	Do.
Leon	KBTX	3	Do.
	KCEN	6	Do.
	KWTX	10	Do.
Liberty	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Limestone	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Lipscomb	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Live Oak	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Llano	KTBC	7	Austin, Tex.
	KHFI	42	Do.
Loving	KOSA	7	Odessa-Midland.
	KMOM+	9	Do.
Lubbock	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Lynn	KCBD+	11	Do.
	KLBK	13	Do.
	KSEL	28	Do.
	KMXN	34	Do.
McCulloch	Over 90 percent cable penetration.		
McLennan	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KDFW	4	Dallas-Fort Worth.
	WFAA	8	Do.
	KTVT	11	Do.
McMullen	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Madison	KBTX	3	Waco-Temple.
	KPRC	2	Houston.
Marion	KTBS	3	Shreveport-Texarkans
	KTAL	6	Do.
	KSLA	12	Do.
Martin	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Mason	NA.		
Matagorda	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Maverick	Over 90 percent cable penetration.		
Medina	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Menard	KRBC+	9	Abilene-Sweetwater.
	KCTV	8	San Angelo.
Midland	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Milam	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KTBC	7	Austin, Tex.
Mills	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
		TEXAS—continued	
Mitchell	KMID	2	Odessa-Midland.
	KMOM	9	Do.
	KTXS	12	Abilene-Sweetwater.
Montague	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	KDFW	4	Dallas-Fort Worth.
	WBAP		Do.
	KTVT	11	Do.
	KDTV	39	Do.
Montgomery	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Moore	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Morris	KTBS	3	Shreveport-Texarkana
	KTAL	6	Do.
	KSLA	12	Do.
Motley	Over 90 percent cable penetration.		
Nacogdoches	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
	KTVT	11	Dallas-Fort Worth.
	KTRE	9	Tyler.
Navarro	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Newton	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Nolan	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
Nueces	KIII+	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Ochiltree	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Oldham	KGNC	4	Do.
	KVII	7	Do.
	KFDA+	10	Do.
Orange	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Palo Pinto	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Panola	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Parker	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Parmer	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
	KCBD+	11	Lubbock.
Pecos	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Polk	KTRE	9	Tyler.
	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KPRC	2	Houston.
Potter	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Presidio	KOSA	7	Odessa-Midland.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
		TEXAS—continued	
Rains	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Randall	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Reagan	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Real	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Red River	KTBS	3	Shreveport-Texarkana
	KTAL	6	Do.
	KSLA	12	Do.
Reeves	KOSA	7	Odessa-Midland.
	KMOM+	9	Do.
Refugio	KIII+	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Roberts	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Robertson*	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Rockwall	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Runnels	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KCTV	8	San Angelo.
Rusk	KTBS	3	Shreveport-Texarkana
	KTAL	6	Do.
	KSLA	12	Do.
	KLTV	7	Tyler.
Sabine	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
	KTRE	9	Tyler.
San Augustine	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
	KTRE	9	Tyler.
San Jacinto	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
San Patricio	KIII+	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
San Saba	KDFW	4	Dallas-Fort Worth.
	KRBC+	9	Abilene-Sweetwater.
	KTBC	7	Austin, Tex.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Schleicher	KCTV	8	San Angelo.
	KRBC+	9	Abilene-Sweetwater.
Scurry	KRBC+	9	Do.
	KTXS	12	Do.
Shackelford	KRBC+	9	Do.
	KTXS	12	Do.
Shelby	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Sherman	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
TEXAS—continued			
Smith	KLTV	7	Tyler.
	KDFW	4	Dallas-Fort Worth.
	KTVT	11	Do.
	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
Somervell	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Starr	KGBT	4	McAllen-Brownsville (Lwr R Grnd).
	KRGV	5	Do.
Stephens	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
	WFAA	8	Dallas-Fort Worth.
	KTVT	11	Do.
Sterling	KRBC+	9	Abilene-Sweetwater.
	KCTV	8	San Angelo.
Stonewall	KRBC+	9	Abilene-Sweetwater.
	KTXS	12	Do.
Sutton	NA.		
Swisher	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA+	10	Do.
Tarrant	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Taylor	KRBG+	9	Abilene-Sweetwater.
	KTXS	12	Do.
Terrell	Over 90 percent cable penetration.		
Terry*	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Throckmorton	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Titus	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Tom Green	KCTV	8	San Angelo.
	KRBC+	9	Abilene-Sweetwater.
Travis	KTBC	7	Austin, Tex.
	KHFI	42	Do.
Trinity	KRTE	9	Tyler.
	KPRC	2	Houston.
	KBTX	3	Waco-Temple.
Tyler	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Upshur	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KLTV	7	Tyler.
Upton	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Uvalde	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Val Verde	N.A.		
Van Zandt	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Victoria	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KIII+	3	Corpus Christi.
Walker	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
	KBTX	3	Waco-Temple.
Waller	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Ward	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM+	9	Do.
Washington	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
	KBTX	3	Waco-Temple.
Webb	KGNS	8	Laredo.
	XEFE	2	Mexico.
Wharton	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Wheeler	KFDA+	10	Amarillo.
Wichita	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Wilbarger	KFDX	3	Do.
	KAUZ	6	Do.
	KSWO	7	Do.
Willacy	KGBT	4	McAllen-Brownsville (Lwr R Grnd).
	KRGV	5	Do.
Williamson	KTBC	7	Austin, Tex.
	KHFI	42	Do.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Wilson	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KWEX	41	Do.
Winkler	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KNOM+	9	Do.
Wise	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Wood	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Yoakum	KCBD+	11	Lubbock.
	KLBK	13	Do.
	KBIM	10	Roswell.
Young	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Zapata	KGNS	8	Laredo.
	KGBT	4	McAllen-Brownsville (Lwr R Grnd).
	XEFB	3	Mexico.
Zavala	WOAI	4	San Antonio.
	KENS	5	Do.

Census county divisions in split counties

Jefferson North: Beaumont, Nome-China.
Jefferson South: All other.

County	Call letters, channel number, and market name		
UTAH			
Beaver	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

UTAH—continued

County	Call letters, channel number, and market name		
Box Elder	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Cache	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Carbon	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Daggett	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Davis	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Duchesne	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Emery	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Garfield	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Grand	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Iron	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Juab	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Kane	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Millard	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Morgan	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Piute	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Rich	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Salt Lake	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
San Juan	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Sanpete	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Sevier	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Summit	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Tooele	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Uintah	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Utah	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Wasatch	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Washington	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
	KORK	3	Las Vegas.
Wayne	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Weber	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.

VERMONT

County	Call letters, channel number, and market name		
Addison*	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
Bennington	WRGB	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
	WAST	13	Do.
Caledonia	WCAX	3	Burlington-Plattsburgh.
	WMTW	8	Portland-Poland Spring.
Chittenden	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	CFCF	12	Canada.
Essex	WCAX	3	Burlington-Plattsburgh.
	WMTW	8	Portland-Poland Spring.
Franklin	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	CBMT	6	Canada.
	CFCF	12	Do.
Grand Isle	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	CBMT	6	Canada.
	CFCF	12	Do.
Lamoille	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	WMTW	8	Portland-Poland Spring.
	CBMT	6	Canada.
Orange	WCAX	3	Burlington-Plattsburgh.
	WMTW	8	Portland-Poland Spring.
Orleans	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WMTW	8	Portland-Poland Spring.
	CBMT	6	Canada.
	CFCF	12	Do.
Rutland	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WRGB	6	Albany-Schenectady-Troy.
	WTEN+	10	Do.
	WAST	13	Do.
Washington	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WMTW	8	Portland-Poland Spring.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
VERMONT—continued			
Windham	WMTW	8	Portland-Poland Spring.
	WHDH	5	Boston.
Windsor	WCAX	3	Burlington-Plattsburgh.
	WMTW	8	Portland-Poland Spring.
VIRGINIA			
Accomack	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WBOC	16	Salisbury.
	WTTG	5	Washington, D.C.
Albemarle and Charlottesville City.	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WSVA	3	Harrisonburg.
Alleghany and Covington City including Clifton Forge City.	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Amelia	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Amherst	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Appomattox	WDBJ	7	Do.
	WSLS	10	Do.
	WLVA	13	Do.
Arlington and Alexandria City.	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Augusta and Stronton City and Waynesboro City.	WTVR	6	Richmond.
	WWBT	12	Do.
	WSVA	3	Harrisonburg.
	WTTG	5	Washington, D.C.
Bath	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
	WSVA	3	Harrisonburg.
Bedford	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Bland	WHIS	6	Bluefield-Beckley-Oak Hill.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Botetourt	WDBJ	7	Do.
	WSLS	10	Do.
	WLVA	13	Do.
Buchanan	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
Buckingham	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Brunswick	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Campbell and Lynchburg City.	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Caroline	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTTG	5	Washington, D.C.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
VIRGINIA—continued			
Carroll	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Charlotte	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
	WTVR	6	Richmond.
Charles City	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Chesterfield and Colonial Heights City.	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Clarke	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Craig	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Culpeper	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Cumberland	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Dickenson	WCYB	5	Bristol-Kingsport-Johnson City.
Dinwiddie and Petersburg City.	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Essex	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WTTG	5	Washington, D.C.
Fairfax and Fairfax City and Falls Church City.	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Fauquier	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Floyd	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Fluvanna	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Franklin	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Frederick and Winchester City.*	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Giles	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Gloucester	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.
Goochland	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

VIRGINIA—continued

County	Call letters, channel number, and market name		
Grayson	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Greene	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WSVA	3	Harrisonburg.
Greensville	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
Halifax	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Hanover	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Henrico and Richmond City.	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Henry and Martinsville City.	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Highland	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WSVA	3	Harrisonburg.
Isle of Wight	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
James City and Williamsburg City.	WTAR	3	Do.
	WAVY	10	Do.
	WVEC	13	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
King and Queen	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WAVY	10	Norfolk-Portsmouth-Newport News-Hampton.
King George	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
King William	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Lancaster	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
Lee	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WATE	6	Knoxville.
	WBIR	10	Do.
Loudoun	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Louisa	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Lunenburg	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Madison	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WSVA	3	Harrisonburg.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
Mathews	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WEVC	13	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.
Mecklenburg	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.
Middlesex	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	13	Do.
Montgomery and Radford City.	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Nansemond and Suffolk City.	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WYAH	27	Do.
Nelson	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
	WTVR	6	Richmond.
	WWBT	12	Do.
New Kent	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Norfolk and Chesapeake City and Portsmouth City and Norfolk City.	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	
	WVEC	13	
Northampton	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Northumberland	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WTTG	5	Washington, D.C.
Nottoway	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Orange	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
VIRGINIA—continued			
Page	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WSVA	3	Harrisonburg.
	WTVR	6	Richmond.
Patrick	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Pittsylvania and Danville City.	WDBJ	7	Do.
	WSLS	10	Do.
	WLVA	13	Do.
	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Powhatan	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Prince Edward	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WLVA	13	Roanoke-Lynchburg.
Prince George and Hopewell City.	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Prince William	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Pulaski	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Rappahannock	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WSVA	3	Harrisonburg.
Richmond	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTTG	5	Washington, D.C.
Roanoke and Roanoke City and Salem City.	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
	WRFT	27	Do.
Rockbridge	WDBJ	7	Do.
	WSLS	10	Do.
	WLVA	13	Do.
Rockingham and Harrisonburg City.	WSVA	3	Harrisonburg.
	WTVR	6	Richmond.
	WWBT	12	Do.
	WTTG	5	Washington, D.C.
Russell	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Scott	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Shenandoah	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WSVA	3	Harrisonburg.
Smyth	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Southampton	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Spotsylvania and Fredericksburg City.	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WTVR	6	Richmond.
Stafford	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
	WTVR	6	Richmond.
Surry	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Sussex	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
Tazewell	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WDBJ	7	Roanoke-Lynchburg.
Virginia Beach and Virginia Beach City,	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Warren	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WSVA	3	Harrisonburg.
Washington and Bristol City.*	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WKPT	19	Do.
Westmoreland	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.
Wise	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Wythe	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Hampton-Newport News and Hampton City and Newport News City.	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
York	WTAR	3	Do.
	WAVY	10	Do.
	WVEC	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
WASHINGTON			
Adams	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KEPR	19	Yakima.
	KNDU	25	Do.
Asotin	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KLEW	3	Yakima.
Benton	KEPR	19	Do.
	KNDU	25	Do.
	KVEW	42	Do.
Chelan	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Clallam	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KVOS	12	Bellingham.
	CBUT	2	Canada.
	CHEK	6	Do.
	CHAN	8	Do.
Clark	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Columbia	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Cowlitz	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Douglas	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Ferry	KREM	2	Do.
	KXLY	4	Do.
	KHQ	6	Do.
Franklin	KEPR	19	Yakima.
	KNDU	25	Do.
	KVEW	42	Do.
Garfield	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Grant	KREM	2	Do.
	KXLY	4	Do.
	KHQ	6	Do.
Grays Harbor	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
Island	KOMO	4	Do.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
	KVOS	12	Bellingham.
	CHEK	6	Canada.
Jefferson	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
King	KOMO	4	Do.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
Kitsap	KOMO	4	Do.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
Kittitas	KNDO	23	Yakima.
	KIMA	29	Do.
Klickitat	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
WASHINGTON—continued			
Lewis	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Lincoln	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Mason	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
Okanogan	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Pacific	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
Pend Oreille	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Pierce	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
San Juan	KOMO	4	Do.
	KING	5	Do.
	KIRO	7	Do.
	KVOS	12	Bellingham.
	CBUT	2	Canada.
	CHEK	6	Do.
	CHAN	8	Do.
Skagit	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
	KVOS	12	Bellingham.
	CHEK	6	Canada.
	CHAN	8	Do.
Skamania	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Snohomish	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
Spokane	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Stevens	KREM	2	Do.
	KXLY	4	Do.
	KHQ	6	Do.
Thurston	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
	KTVW	13	Do.
Wahkiakum	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KPTV	12	Do.
Walla Walla	KEPR	19	Yakima.
	KNDU	25	Do.
	KVEW	42	Do.
	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Whatcom	KVOS	12	Bellingham.
	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	CBUT	2	Canada.
	CHEK	6	Do.
	CHAN	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
WASHINGTON—continued			
Whitman	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Yakima	KNDO	23	Yakima.
	KIMA	29	Do.
	KAPP	35	Do.
WEST VIRGINIA			
Barbour	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Berkeley	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
Boone	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Braxton	WSAZ	3	Do.
	WCHS	8	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
	WDTV	5	Clarksburg-Weston.
Brooke	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Cabell	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Calhoun	WSAZ	3	Do.
	WCHS	8	Do.
	WHTN	13	Do.
	WDTV	5	Clarksburg-Weston.
Clay	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
Doddridge *	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
Fayette	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Gilmer	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
	WSAZ	3	Charleston-Huntington.
Grant	WSVA	3	Harrisonburg.
	WJAC	6	Johnstown-Altoona.
Greenbrier	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Hampshire	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WSVA	3	Harrisonburg.
	WJAC	6	Johnstown-Altoona.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
WEST VIRGINIA—continued			
Hancock	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Hardy	WSVA	3	Harrisonburg.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WTOP	9	Do.
Harrison	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WTAE	4	Pittsburgh.
Jackson	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Jefferson	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
Kanawha	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Lewis	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
Lincoln	WSAZ	3	Charleston-Huntington.
	WHTN	13	Do.
	WCHS	8	Do.
Logan	WSAZ	3	Do.
	WCHS	8	Do.
	WHTN	13	Do.
Marion	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Marshall	WTRF	7	Do.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Mason	WSAZ	5	Charleston-Huntington
	WCHS	8	Do.
	WHTN	13	Do.
McDowell	WSAZ	3	Do.
	WCHS	8	Do.
	WHTN	13	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
Mercer	WOAY	4	Do.
	WHIS	6	Do.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Mineral	Over 90 percent cable penetration.		
Mingo	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Monongalia	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WBOY	12	Clarksburg-Weston.
	WTRF	7	Wheeling-Steubenville.
Monroe	WHIS	6	Bluefield-Beckley-Oak Hill.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	WEST VIRGINIA—continued		
Morgan	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WFBG	10	Johnstown-Altoona.
Nicholas	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
Ohio	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Pendelton	WSVA	3	Harrisonburg.
Pleasants	WTRF	7	Wheeling-Steubenville.
	WCHS	8	Charleston-Huntington.
	WDTV	5	Clarksburg-Weston.
Pocahontas	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Preston	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WDIV	5	Clarksburg-Weston.
	WTRF	7	Wheeling-Steubenville.
Putnam	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Raleigh	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Randolph	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WCHS	8	Charleston-Huntington.
Ritchie	WSAZ	3	Do.
	WCHS	8	Do.
	WHTN	13	Do.
	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WTRF	7	Wheeling-Steubenville.
Roane	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Summers	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
Taylor	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
Tucker	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Tyler	WTRF	7	Do.
	WDTV	5	Clarksburg-Weston.
Upshur	WDTV	5	Do.
	WBOY	12	Do.
Wayne	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Webster	WSAZ	3	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
	WDTV	5	Clarksburg-Weston.
Wetzel	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Wirt	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Wood	WSAZ	3	Do.
	WCHS	8	Do.
	WHTN	13	Do.
	WTAP	15	Parkersburg.
Wyoming	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WCHS	8	Charleston-Huntington.
	WISCONSIN		
Adams	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WISC	3	Madison.
Ashland	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
Barron	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	WEAU	13	La Crosse-Eau Claire.
Bayfield	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
Brown	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Buffalo	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	KROC	10	Rochester-Mason City-Austin.
Burnett	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
Calumet	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Chippewa	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Clark	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Columbia	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Crawford	WKBT	8	La Crosse-Eau Claire.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Dane	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Dodge	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

WISCONSIN—continued

County	Call letters, channel number, and market name		
Door	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Douglas	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
Dunn	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Eau Claire	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Florence	WLUC	6	Marquette.
	WFRV+	5	Green Bay.
	WAEO	12	Wausau-Rhinelander.
Fond du Lac	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
	KFIZ	34	Fond du Lac.
	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
Forest	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
Grant	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WISC	3	Madison.
Green	WISC	3	Do.
	WMTV	15	Do.
	WKOW	27	Do.
	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
Green Lake	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
	WISC	3	Madison.
Iowa	WISC	3	Do.
	WMTV	15	Do.
	WKOW	27	Do.
Iron	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
Jackson	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Jefferson	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Juneau	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WISC	3	Madison.
	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
Kenosha	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
Kewaunee	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
La Crosse	WKPT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WXOW	19	Do.
Lafayette	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Langlade	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Lincoln	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
Manitowoc	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Marathon	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
	WEAU	13	La Crosse-Eau Claire.
Marinette	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Marquette	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Menominee	WBAY	2	Do.
	WFRV+	5	Do.
	WLUK	11	Do.
Milwaukee	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
Monroe	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Oconto	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Oneida	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
Outagamie	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Ozaukee	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
Pepin*	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
Pierce	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Polk	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Portage	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Price	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
	WEAU	13	La Crosse-Eau Claire.
Racine	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
	WLS	7	Chicago.
	WGN	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

WISCONSIN—continued

County	Call letters, channel number, and market name		
Richland	WISC	3	Madison.
	WKBT	8	La Crosse-Eau Claire.
Rock	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Rusk	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WSAU	7	Wausau-Rhinelander.
St. Croix	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Sauk	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Sawyer	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
Shawano	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
	WSAU	7	Wausau-Rhinelander.
Sheboygan	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
Taylor	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WEAU	13	La Crosse-Eau Claire.
Trempealeau	WKBT	8	Do.
	WEAU	13	Do.
Vernon	WKBT	8	Do.
	WEAU	13	Do.
	KROC	10	Rochester-Mason City-Austin.
Vilas	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
Walworth	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WBBM	2	Chicago.
	WGN	9	Do.
	WISC	3	Madison.
	WREX	13	Rockford.
Washburn	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO+	10	Do.
Washington	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
Waukesha	WTMJ	4	Do.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
Waupaca	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
	WSAU	7	Wausau-Rhinelander.
Waushara	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
	WSAU	7	Wausau-Rhinelander.
Winnebago	WBAY	2	Green Bay.
	WFRV+	5	Do.
	WLUK	11	Do.
	KFIZ	34	Fond Du Lac.
Wood	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WEAU	13	La Crosse-Eau Claire.

SIGNIFICANTLY VIEWED SIGNALS—Continued

WYOMING

County	Call letters, channel number, and market name		
Albany	KOA	4	Denver.
	KLZ	7	Do.
	KBTV	9	Do.
	KFBC	5	Cheyenne.
Big Horn	KOOK	2	Billings.
	KULR	8	Do.
	KWRB	10	Casper-Riverton.
Campbell	Over 90 percent cable penetration.		
Carbon	KTWO	2	Casper-Riverton.
	KFBC	5	Cheyenne.
Converse	KTWO	2	Casper-Riverton.
	KSTF	10	Cheyenne.
Crook	KOTA+	3	Rapid City.
	KTWO	2	Casper-Riverton.
Fremont	KTWO	2	Do.
	KWRB	10	Do.
Goshen	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Hot Springs	KTWO	2	Casper-Riverton.
	KWRB	10	Do.
Johnson	KTWO	2	Do.
Laramie	KFBC	5	Cheyenne.
	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Lincoln	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
	KCPX	4	Salt Lake City.
	KSL	5	Do.
Natrona	KTWO	2	Casper-Riverton.
Niobrara	KTWO	2	Do.
	KFBC	5	Cheyenne.
Park	KOOK	2	Billings.
	KULR	8	Do.
Platte	KFBC	5	Cheyenne.
	KSTF	10	Do.
	KTWO	2	Casper-Riverton.
Sheridan	KOOK	2	Billings.
	KULR	8	Do.
	KTWO	2	Casper-Riverton.
	KOTA+	3	Rapid City.
Sublette	KTWO	2	Casper-Riverton.
	KID	3	Idaho Falls-Pocatello.
Sweetwater	Over 90 percent cable penetration.		
Teton	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Uinta	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Washakie	KTWO	2	Casper-Riverton.
	KWRB	10	Do.
	KCPX	4	Salt Lake City.
	KSL	5	Do.
Weston	KTWO	2	Casper-Riverton.
	KOTA+	3	Rapid City.
Yellowstone National Park	KID	3	Idaho Falls-Pocatello.
	KULR	8	Billings.

[37 F.R. 13867, July 14, 1972, as amended at 37 F.R. 20033, Sept. 23, 1972]

PART 78—CABLE TELEVISION RELAY SERVICE

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APPENDIX B—Significantly viewed television stations.

APPENDIX D—Consensus agreement.

AUTHORITY: The provisions of this Part 78 issued under secs. 2, 3, 4, 301, 303, 307, 308, 309, 48 Stat., as amended, 1064, 1065, 1066, 1081, 1082, 1083, 1084, 1085; 47 U.S.C. 152, 153, 154, 301, 303, 307, 308, 309.

SOURCE: The provisions of this Part 78 appear at 37 F.R. 3292, Feb. 12, 1972, unless otherwise noted.

Subpart A—General

§ 78.1 Purpose.

The rules and regulations set forth in this part provide for the licensing and operation of fixed or mobile cable television relay stations used for the transmission of television and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from the point of reception to a terminal point from which the signals are distributed to the public by cable.

§ 78.3 Other pertinent rules.

Other pertinent provisions of the Commission's rules and regulations relating to the Cable Television Relay Service are included in the following parts of this chapter:

Part 0—Commission Organization.
Part 1—Practice and Procedure.
Part 76—Cable Television Service.

§ 78.5 Definitions.

For purposes of this part, the following definitions are applicable. For other definitions, see Part 76 (Cable Television Service) of this chapter.

(a) *Cable television relay (CAR) station.* A fixed or mobile station used for the transmission of television and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from the point of reception to a terminal point from which the signals are distributed to the public by cable.

NOTE: Except where the rules contained in this part make separate provision, the term "cable television relay" or "CAR" includes the term "local distribution service" or "LDS", the term "cable television relay studio to headend link" or "SHL," and the term "cable television relay pickup," as defined in paragraphs (b), (c), and (d) of this section.

(b) *Local distribution service (LDS) station.* A fixed CAR station used within a cable television system or systems for the transmission of television signals and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from a local transmission point to one or more receiving points, from which the communications are distributed to the public by cable. LDS stations may also engage in repeatered operation.

(c) *Cable television relay studio to headend link (SHL) station.* A fixed CAR station used for the transmission of television program material and related communications from a cable television studio to the headend of a cable television system.

(d) *Cable television relay pickup station.* A land mobile CAR station used for the transmission of television signals and related communications from the scenes of events occurring at points removed from cable television studios to cable television studios or headends.

(e) *Remote control operation.* Operation of a station by a qualified operator on duty at a control position from which the transmitter is not visible but which control position is equipped with suitable control and telemetering circuits so that the essential functions that could be performed at the transmitter can also be performed from the control point.

(f) *Attended operation.* Operation of a station by a qualified operator on duty at the place where the transmitting apparatus is located with the transmitter in plain view of the operator.

(g) *Unattended operation.* Operation of a station by automatic means whereby the transmitter is turned on and off and performs its functions without attention by a qualified operator.

Subpart B—Applications and Licenses

§ 78.11 Permissible service.

(a) Cable television relay stations are authorized to relay television broadcast and related audio signals, the signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting intended for use solely by one or more cable television systems. LDS stations are authorized to relay television broadcast and related audio signals, the signals of standard and FM broadcast stations, signals of instructional television fixed stations, cablecasting, and such other communications as may be authorized by the Commission. Relaying includes retransmission of signals by intermediate relay stations in the system. CAR licensees may interconnect their facilities with those of other CAR or common carrier licensees, and may also retransmit the signals of such CAR or common carrier stations, provided that the program material retransmitted meets the requirements of this paragraph.

(b) The transmitter of a cable television relay station using FM transmission may be multiplexed to provide additional communication channels for the transmission of standard and FM broadcast station programs and operational communications directly related to the technical operation of the relay system (including voice communications, telemetry signals, alerting signals, fault reporting signals, and control signals). A cable television relay station will be authorized only where the principal use is the transmission of television broadcast program material or cablecasting: *Provided, however,* That this requirement shall not apply to LDS stations.

(c) Cable television relay station licenses may be issued to cable television owners or operators and to cooperative enterprises wholly owned by cable television owners or operators.

(d) Cable television relay systems shall supply program material to cable television systems only in the following circumstances:

(1) Where the licensee of the CAR station or system is owner or operator of the cable television systems supplied with program material; or

(2) Where the licensee of the CAR station or system supplies program material to cable television systems either without charge or on a nonprofit, cost-sharing basis pursuant to a written contract between the parties involved which provides that the CAR licensee shall have exclusive control over the operation of the cable television relay stations licensed to him and that contributions to capital and operating expenses are accepted only on a cost-sharing, nonprofit basis, prorated on an equitable basis among all cable television systems being supplied with program material in whole or in part. Records showing the cost of the service and its nonprofit, cost-sharing nature shall be maintained by the CAR licensee and held available for inspection by the Commission.

(e) A CAR licensee shall file a notification with the Commission thirty (30) days prior to supplying program material to any cable television system that has not been specified in its license application or in a prior notification to the Commission containing the following information:

(1) A copy of the contract between the parties pursuant to which the program material will be supplied;

(2) Network and station origin of the signals to be transmitted or, if cablecasting, the intended source and general nature of the programing;

(3) Location of the point at which reception will be made;

(4) Location of intermediate relay stations in the system through which the signal will be transmitted;

(5) Location of the relay station that will supply the program material to the cable television system;

(6) Name of each community to be served by the cable television system;

(7) Current number of subscribers of the cable television system; and

(8) Identity of the owner or owners of the cable television system.

The CAR licensee may institute the service described in such notification 30 days after filing unless the Commission during that period notifies the licensee that the information supplied is inadequate or that the proposed service is not authorized under these rules, and the licensee shall then have the right to amend or file another notification to remedy the inadequacy or defect and to institute the service 30 days thereafter, or at such earlier date as the Commission may set upon finding that the inadequacy or defect has been remedied.

(f) Each CAR licensee providing program material to a cable television system pursuant to paragraph (d)(2) of this section shall file an annual report with the Commission within 90 days of the close of its fiscal year containing:

(1) A financial statement of such operations in sufficient detail to show compliance with the requirements of this section;

(2) The names of those who have shared the use of the licensed facilities;

(3) A brief statement as to the use of the facilities made by each person sharing the use and an estimate of the approximate percentage of use by each participant; and

(4) Any change in the items previously reported to the Commission in the application for the license or in a notification under this section.

(g) The provisions of paragraph (d) of this section and § 78.13 shall not apply to a licensee who has been licensed in the CAR service pursuant to § 21.709 of this chapter, except that paragraph (d) of this section shall apply with respect to facilities added or cable television systems first served after February 1, 1966.

(h) Except during momentary circuit failure and brief transition periods, a cable television relay station shall not be permitted to radiate unless it is supplying programs to one or more users.

(i) The license of a CAR pickup station authorizes the transmission of program material, and related communications necessary to the accomplishment of such transmission, from the scenes of events occurring in places other than a cable television studio, to the studio or headend of its associated cable television system, or to such other cable television systems as are carrying the same program material. CAR pickup stations may be used to provide temporary CAR studio-to-headend links or CAR circuits consistent with this part without further authority of the Commission: *Provided, however,* That prior Commission authority shall be obtained if the transmitting antenna to be installed will increase the height of any natural formation or manmade structure by more than 20 feet and will be in existence for a period of more than 2 consecutive days: *And provided, further,* That if the transmitting equipment is to be operated for more than 1 day outside of the area to which the CAR station has been licensed, the Commission, the Engineer in charge of the district in which the station is licensed to operate, and the Engineer in charge of the district in which the equipment will be temporarily operated shall be notified at least 1 day prior to such operation. If the decision to continue operation for more than 1 day is not made until the operation has begun, notice shall be given to the Commission and the relevant Engineers in charge within 1 day after such decision. In all instances, the Commission and the relevant Engineers in charge shall be notified when the transmitting equipment has been returned to its licensed area.

[37 F.R. 3292, Feb. 12, 1972, as amended at 37 F.R. 15926, Aug. 8, 1972]

§ 78.13 Eligibility for license.

A license for a cable television relay station will be issued only to the owner of a cable television system or to a cooperative enterprise wholly owned by cable television owners or operators upon a showing that applicant is qualified under the Communications Act of 1934, that frequencies are available for the proposed operation, and that the public interest, convenience, and necessity will be served by a grant thereof.

§ 78.15 Contents of applications.

(a) An application for a new cable television relay station or for changes in the facilities of an existing station shall specify the call sign and location of any television, standard, or FM broadcast stations or instructional television fixed stations to be received and the intended source and general nature of any cablecasting to be relayed, the location of the point at which reception will be made, the number and location of any intermediate relay stations in the system, the location of the terminal receiving point(s) in the system, the name or names of the communities to be served by the cable television system or systems to which the programs will be delivered, the current number of subscribers of each such cable television system, and the name of any other licensee to whom the same program will be delivered through interconnection facilities. An application for a new LDS station or for changes in the facilities of an existing station shall specify in detail the precise nature and technical operation of any service other than the relay of television broadcast signals proposed to be provided on the LDS facilities, including any sections of this part for which waiver is sought.

(b) An application for any authorization subject to § 78.27 for a station used or to be used for the transmission of television broadcast signals shall contain a statement that the applicant has notified the licensee or permittee of any television broadcast station within whose predicted Grade B contour the system operates or will operate, the licensee or permittee of any 100-watt or higher power television translator station licensed to the community of the system, the franchising authority, the superintendent of schools in the community of the system, and any local or state educational television authorities, of the filing of the application. Such statement of the applicant shall be supported by copies of the letters of notification. The notice shall include the fact of intended filing by the applicant, the name and mailing address of each cable television system served or to be served under the authorization sought, the community and area served by each cable television system, and the television, standard broadcast, FM, and instructional television fixed stations whose signals will be carried by each cable television system.

(c) An application for a construction permit for a new CAR pickup station or for renewal of license of an existing station shall designate the cable television system with which it is to be operated and specify the area in which the proposed operation is intended.

(d) An application for a CAR studio to headend link or LDS station construction permit shall contain a statement that the applicant has investigated the possibility of using cable rather than microwave and the reasons why it was decided to use microwave rather than cable.

NOTE: As used in this § 78.15 the term "predicted Grade B contour" means the field intensity contour defined in § 73.683(a) of this chapter, the location of which is determined exclusively by means of the calculations prescribed in § 73.684 of this chapter.

§ 78.16 Who may sign applications.

(a) Applications, amendments thereto, and related statements of fact required by the Commission shall be personally signed by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; by an officer, if the applicant is a corporation; or by a member who is an officer, if the applicant is an unincorporated association. Applications, amendments, and related statements of fact filed on behalf of government entities shall be signed by such duly elected or appointed officials as may be competent to do so under the laws of the applicable jurisdiction.

(b) Applications, amendments thereto, and related statements of fact required by the Commission may be signed by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall in that event separately set forth the reasons why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

(c) Only the original of applications, amendments, or related statments of fact need be signed; copies may be conformed.

(d) Applications, amendments, and related statements of fact need not be submitted under oath. Willful false statements made therein, however, are punishable by fine and imprisonment, United States Code, title 18, section 1001, and by appropriate administrative sanctions, including revocation of station license pursuant to section 312(a)(1) of the Communications Act of 1934, as amended.

[37 F.R. 15926, Aug. 8, 1972]

§ 78.17 Amendment of applications.

Any application may be amended as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the application, merely by filing the appropriate number of copies of the amendment in question duly executed in accordance with § 78.16. If a petition to deny has been filed, the amendment shall be served on the petitioner.

[37 F.R. 15926, Aug. 8, 1972]

§ 78.18 Frequency assignments.

(a) The following channels may be assigned to cable television relay stations:

(1) For cable television relay stations using FM transmission:

Group A *MHz*	*Group B* *MHz*
12,700–12,725	12,712.5–12,737.5
12,725–12,750	12,737.5–12,762.5
12,750–12,775	12,762.5–12,787.5
12,775–12,800	12,787.5–12,812.5
12,800–12,825	12,812.5–12,837.5
12,825–12,850	12,837.5–12,862.5
12,850–12,875	12,862.5–12,887.5
12,875–12,900	12,887.5–12,912.5
12,900–12,925	12,912.5–12,937.5
12,925–12,950	

(2) Cable television relay stations using vestigial sideband AM transmission:

Group C *MHz*	*Group D* *MHz*
12,700.5–12,706.5	12,759.7–12,765.7
12,706.5–12,712.5	12,765.7–12,771.7
12,712.5–12,718.5	12,771.7–12,777.7
12,718.5–12,722.5 [1]	12,777.7–12,781.7 [1]
12,722.5–12,728.5	12,781.7–12,787.7
12,728.5–12,734.5	12,787.7–12,793.7
12,734.5–12,740.5	12,793.7–12,799.7
12,740.5–12,746.5	12,799.7–12,805.7
12,746.5–12,752.5	12,805.7–12,811.7
12,752.5–12,758.5	12,811.7–12,817.7
12,820.5–12,826.5	12,879.7–12,885.7
12,826.5–12,832.5	12,885.7–12,891.7
12,832.5–12,838.5	12,891.7–12,897.7
12,838.5–12,844.5	12,897.7–12,903.7
12,844.5–12,850.5	12,903.7–12,909.7
12,850.5–12,856.5	12,909.7–12,915.7
12,856.5–12,862.5	12,915.7–12,921.7
12,862.5–12,868.5	12,921.7–12,927.7
12,868.5–12,874.5	12,927.7–12,933.7

[1] For transmission of pilot subcarriers, or other authorized narrow band signals.

Auxiliary Channels (*MHz*)

12,939.7–12,945.7   12,933.7–12,939.7

(3) For cable television relay stations using frequency modulation to transmit a baseband of frequency-division multiplexed standard television signals:

(i) When the baseband comprises three or four standard television signals:

Group E *MHz*	*Group F* *MHz*
12,700–12,775	12,725–12,800
12,775–12,850	12,800–12,875
12,850–12,925	12,875–12,950

(ii) When the baseband comprises five to eight standard television signals:

Group G (*MHz*)

12,825–12,950   12,700–12,825

(iii) When the baseband comprises nine or more standard television signals:

Group H (*MHz*)

12,700–12,950

(b) Television pickup, STL, and intercity relay stations may be assigned channels in the band 12,700–12,950 MHz subject to the conditions that no harmful interference is caused to cable television relay stations authorized at the time of such grants. Similarly, new cable television relay stations shall not cause harmful interference to television STL and intercity relay stations authorized at the time of such grants. Television pickup stations and CAR pickup stations will be assigned channels in the band on a coequal basis subject to the condition that they accept interference from and cause no interference to existing or subsequently authorized television STL, television intercity relay, fixed CAR, CAR SHL, or LDS stations. A cable television system operator will normally be limited in any one area to the assignment of not more than three channels for CAR pickup use: *Provided, however,* That additional channels may be assigned upon a satisfactory showing that additional channels are necessary and are available.

(c) An application for a cable television relay station shall be specific with regard to the channel or channels requested. Channels shall be identified by the channel-edge frequencies listed in paragraph (a) of this section.

(d) For cable television relay stations using frequency modulation to transmit a single television signal, channels normally shall be selected from Group A. Channels in Group B will be assigned only on a case-by-case basis upon an adequate showing that Group A channels cannot be used and that such use will not degrade the technical quality of service provided in Group A channels to the extent that the Group A channels could not be used. On-the-air tests may be required before channels in Group B are permitted to be placed in regular use.

(e) For cable television relay stations using vestigial sideband AM transmission, channels from only Group C or Group D normally will be assigned a station, although upon adequate showing variations in the use of channels in Groups C and D may be authorized on a case-by-case basis in order to avoid potential interference or to permit a more efficient use. The use of channels in both Groups C and D may be authorized for repeated operation, or where the channels in one group are not sufficient to accommodate the services proposed to be provided on the cable television system, if the Commission finds that such use of channels in both groups would serve the public interest.

(f) For vestigial sideband AM transmission, the assigned visual carrier frequency for each channel listed in Group C or Group D shall be 1.25 MHz above the lower channel-edge frequency. The center frequency for the accompanying FM aural carrier in each channel shall be 4.5 MHz above the corresponding visual carrier frequency.

(g) For cable television relay stations using frequency modulation to transmit a baseband of frequency-division multiplexed standard television signals, channels will be assigned from Groups E, F, G, and H according to the number of standard television signals which comprise the baseband, as set forth in paragraph (a)(3) of this section. The station license will indicate the number of standard television signals authorized to be multiplexed for transmission in the assigned channel. The transmission of additional standard television signals may be authorized upon a showing that such can be provided without degradation of the technical quality of the service, and that interference will not be caused to existing operations.

(h) Should any conflict arise among applications for stations in this band, priority will be based on the filing date of an application completed in accordance with the instructions thereon.

[37 F.R. 3292, Feb. 12, 1972. Redesignated at 37 F.R. 15926, Aug. 8, 1972]

§ 78.19 Interference.

(a) Applicants for cable television relay stations shall endeavor to select an assignable frequency or frequencies which will be least likely to result in interference to other licensees in the same area.

(b) Applicants for cable television relay stations shall take full advantage of all known techniques, such as the geometric arrangement of transmitters and receivers, the use of minimum power required to provide the needed service, and the use of highly directive transmitting and receiving antenna systems, to prevent interference to the reception of television STL, television intercity relay, and other CAR stations.

(c) *Radio Astronomy and Radio Research Installations.* In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, W. Va., and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, W. Va., an applicant for authority to construct a cable television relay station, except a CAR pickup station, or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39°15′ N. on the north, 78°30′ W. on the east, 37°30′ N. on the south and 80°30′ W. on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, Post Office Box No. 2, Green Bank, WV 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the Observatory. After receipt of such application, the Commission will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(d) *Location on Government land.* Applicants proposing to construct a cable television relay station on a site located under the jurisdiction of the U.S. Forest Service, U.S. Department of Agriculture, or the Bureau of Land Management, U.S. Department of the Interior, must supply the information and must follow the procedure prescribed by § 1.70 of this chapter.

[37 F.R. 3292, Feb. 12, 1972, as amended at 37 F.R. 15926, Aug. 8, 1972]

§ 78.20 Acceptance of applications; public notice.

(a) Applications which are tendered for filing in Washington, D.C., are dated upon receipt and then forwarded to the Cable Television Bureau, where an administrative examination is made to ascertain whether the applications are complete. Applications found to be complete or substantially complete are accepted for filing and are given a file number. In case of minor defects as to completeness, the applicant will be required to supply the missing information. Applications which are not substantially complete will be returned to the applicant.

(b) Acceptance of an application for filing means only that it has been the subject of a preliminary review by the Commission's administrative staff as to completeness. Applications which are determined to be clearly not in accordance with the Commission's rules or other requirements, unless accompanied by an appropriate request for waiver, will be considered defective and will not be accepted for filing, or if inadvertently accepted for filing, will be dismissed. Requests for waiver shall show the nature of the waiver or exception desired and shall set forth the reasons in support thereof.

(c) The Commission will give public notice of all applications and major amendments thereto which have been accepted for filing. No application shall be acted on less than thirty (30) days from the date of public notice.

[37 F.R. 15926, Aug. 8, 1972]

§ 78.21 Dismissal of applications.

(a) Any application may, on request of the applicant, be dismissed without prejudice as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the application. An applicant's request for the return of an application will be regarded as a request for dismissal.

(b) Failure to prosecute an application, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Such dismissal will be without prejudice if it occurs prior to the adoption date of any final action taken by the Commission with respect to the application.

[37 F.R. 15927, Aug. 8, 1972]

§ 78.22 Objections to applications.

(a) Any party in interest may file a petition to deny any application (whether as originally filed or as amended) no later than thirty (30) days after issuance of a public notice of the acceptance for filing of any such application or amendment thereto. Petitions to deny shall contain specific allegations of fact sufficient to show that the petitioner is a party in interest and that a grant of the application would be prima facie inconsistent with the public interest, convenience, and necessity. Such allegations of fact shall, except for those of which official notice may be taken, be supported by affidavit of a person or persons with personal knowledge thereof.

(b) The applicant may file an opposition to any petition to deny, and the petitioner may file a reply to such opposition (see § 1.45 of this chapter), in which allegations of fact or denials thereof shall be supported by affidavit of a person or persons with personal knowledge thereof.

(c) Notwithstanding the provisions of paragraph (a) of this section, before Commission action on any application for an instrument of authorization, other than a license to cover a construction permit, any person may file informal objections to the grant. Such objections may be submitted in letter form (without extra copies) and shall be signed by the objector. The limitation on pleadings and time for filing pleadings provided for in § 1.45 of this chapter shall not be applicable to any objections duly filed pursuant to this paragraph.

[37 F.R. 15927, Aug. 8, 1972]

§ 78.23 Equipment tests.

(a) During the process of construction of a cable television relay station, the permittee, after notifying the Commission and Engineer in Charge of the district in which the station is located, may, without further authority of the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, the rules and regulations, and the applicable engineering standards.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid.

(d) The authorization for tests contained in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

§ 78.25 Service or program tests.

(a) Upon completion of construction of a cable television relay station in accordance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations and applicable engineering standards, and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee of such station may, without further authority of the Commission, conduct service or program tests: *Provided, however,* That the Engineer in Charge of the district in which the station is located and the Commission are notified at least two (2) days (not including Sundays and Saturdays and legal holidays when the offices of the Commission are not open) in advance of the beginning of such operation.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of such tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Unless sooner suspended or revoked, program test authority will continue valid during Commission consideration of the application for license, and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated by final determination upon the application for station license.

(d) The authorization for tests contained in this section shall not be construed as approval by the Commission of the application for station license.

§ 78.27 License conditions.

Authorizations (including initial grants, modifications, assignments or transfers of control, and renewals) in the Cable Television Relay Service to construct or operate fixed or mobile stations to relay television and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting to cable television systems, either directly or indirectly, shall contain the condition that such cable television systems shall operate in compliance with the provisions of Part 76 (Cable Television Service) of this chapter.

§ 78.29 License period.

Licenses for cable television relay stations will be issued for a period not to exceed five (5) years. On and after February 1, 1966, licenses for CAR stations ordinarily will be issued for a period expiring on February 1, 1971, and, when regularly renewed, at 5-year intervals thereafter. When a license is granted subsequent to the last renewal date for CAR stations, the license will be issued only for the unexpired period of the current license term of such stations. The license renewal date applicable to CAR stations may be varied as necessary to permit the orderly processing of renewal applications, and individual station licenses may be granted or renewed for a shorter period of time than that generally prescribed for CAR stations, if the Commission finds that the public interest, convenience, and necessity would be served by such action.

§ 78.31 Temporary extension of license.

Where there is pending before the Commission any application, investigation, or proceeding which, after hearing, might lead to or make necessary the modification of, revocation of or the refusal to renew an existing cable television relay station license, the Commission will grant a temporary extension of such license: *Provided, however,* That no such temporary extension shall be construed as a finding by the Commission that the operation of any CAR station thereunder will serve the public interest, convenience, and necessity beyond the express terms of such temporary extension of license: *And provided, further,* That such temporary extension of license will in nowise affect or limit the action of the Commission with respect to any pending application or proceeding.

§ 78.33 Special temporary authority.

(a) Notwithstanding the requirements of §§ 78.15 and 78.20, in circumstances requiring immediate or temporary use of facilities, a request may be made for special temporary authority to install and operate new equipment or to operate licensed equipment in a manner different from that authorized in a station license.

Any such request may be in letter form, and shall be submitted in duplicate: *Provided, however,* That in cases of emergency involving danger to life or property or due to damage to equipment, such request may be made by telephone or telegraph with the understanding that a written request shall be submitted within ten (10) days thereafter.

(b) Special temporary authority may also be requested to conduct a field survey to determine necessary data in connection with the preparation of a formal application for installation of a radio system under this part. Such authority may be granted to equipment suppliers and others who are not operators of cable television systems, as well as to cable operators, to conduct equipment, program, service, and path tests.

(c) Any request for special temporary authority shall be clear and complete within itself as to the authority requested. In addition, such requests shall contain the following information:

(1) Name, address, and citizenship of applicant;

(2) Grounds for special action, including a description of any emergency or damage to equipment;

(3) Type of operation to be conducted;

(4) Purpose of operation;

(5) Time and date of proposed operation;

(6) Class of station and nature of service;

(7) Location of station;

(8) Equipment to be used, specifying manufacturer, model number, and number of units;

(9) Frequency or frequencies desired, consistent with § 78.18: *Provided, however,* That in the case of events of widespread interest and importance that cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested on a showing that operation thereon will not cause interference to established stations: *And provided, further,* That in no case will a cable television relay operation be authorized on frequencies employed for the safety of life and property;

(10) Plate power input to final radio frequency stage;

(11) Type of emission;

(12) Description of antenna to be used, including height. In the event that the proposed antenna installations will increase the height of any natural formation, or existing manmade structure, by more than twenty (20) feet, a vertical plan sketch showing the height of the structures proposed to be erected, the height above ground of any existing structure, the elevation of the site above mean sea level, and the geographic coordinates of the proposed sites shall be submitted with the application.

(d) Except in emergencies involving safety of life or property or due to damage to equipment, a request for special temporary authority shall be filed at least ten (10) days prior to the date of proposed operation, or shall be accompanied by a statement of reasons for the delay in submitting such request.

(e) If the Commission finds that special temporary authority is in the public interest, it may grant such authority for a period not exceeding ninety (90) days, and, on a like finding, may extend such authority for one additional period not to exceed ninety (90) days.

[37 F.R. 15927, Aug. 8, 1972]

§ 78.35 Assignment or transfer of control.

(a) No assignment of the license or construction permit of a cable television relay station or transfer of control of a CAR licensee or permittee shall occur without prior Commission authorization.

(b) If an assignment or transfer of control does not involve a substantial change of interests, the provisions of §§ 78.20(c) and 78.22, concerning public notice and objections, shall be waived.

[37 F.R. 15927, Aug. 8, 1972]

Subpart C—General Operating Requirements

§ 78.51 Remote control operation.

(a) A cable television relay station may be operated by remote control provided the following conditions are met:

(1) The transmitter and associated control system shall be installed and protected in a manner designed to prevent tampering or operation by unauthorized persons.

(2) An operator meeting the requirements of § 78.61 shall be on duty at the remote control position and in actual charge thereof at all times when the station is in operation.

(3) Facilities shall be provided at the control position which will permit the operator to turn the transmitter on and off at will. The control position shall also be equipped with suitable devices for observing the overall characteristics of the transmissions and a carrier operated

device which will give a continuous visual indication whenever the transmitting antenna is radiating a signal. The transmitting apparatus shall be inspected as often as may be necessary to insure proper operation.

(4) The control circuits shall be so designed and installed that short circuits, open circuits, other line faults, or any other cause which would result in loss of control of the transmitter will automatically cause the transmittter to cease radiating.

(b) An application for authority to construct a new station or to make changes in the facilities of an existing station and which proposes operation by remote control shall include an adequate showing of the manner of compliance with the requirements of this section.

§ 78.53 Unattended operation.

(a) A cable television relay station (other than a CAR pickup station) may be operated unattended provided that the following requirements are met:

(1) The transmitter and associated control circuits shall be installed and protected in a manner designed to prevent tampering or operation by unauthorized persons.

(2) The transmitter shall be equipped with an automatic control which will permit it to radiate only when it is relaying an incoming signal. The automatic control may be either a time clock or a signal sensing device. Allowances may be made for momentary circuit failures and brief transition periods when no incoming signal is available for retransmission.

(3) If the transmitting apparatus is located at a site which is not readily accessible at all hours and in all seasons, means shall be provided for turning the transmitter on and off at will from a location which can be reached promptly at all hours and in all seasons.

(4) Licensed radio personnel responsible for the maintenance of the station shall be available on call at a location which will assure expeditious performance of such technical servicing and maintenance as may be necessary whenever the station is operating. In lieu thereof, arrangements may be made to have an unlicensed person or persons available at all times when the transmitter is operating, to turn the transmitter off in the event that it is operating improperly. The transmitter may not be restored to operation until the malfunction has been corrected by a technically qualified person.

(5) The station licensee shall be responsible for the proper operation of the station at all times and is expected to provide for observations, servicing, and maintenance as often as may be necessary to insure proper operation. All adjustments or tests during or coincident with the installation, servicing, or maintenance of the station which may affect its operation shall be performed by or under the immediate supervision of a licensed radio operator as provided in § 78.61.

(b) An application for authority to construct a new station or make changes in the facilities of an existing station and which proposes unattended operation shall include an adequate showing as to the manner of compliance with the requirements of this section.

§ 78.55 Time of operation.

(a) A cable television relay station is not expected to adhere to any prescribed schedule of operation. However, it is limited to operation only when the originating station, or stations, is transmitting the programs which it relays except as provided in paragraph (b) of this section.

(b) The transmitter may be operated for short periods of time to permit necessary tests and adjustments. The radiation of an unmodulated carrier for extended periods of time or other unnecessary transmissions are forbidden.

§ 78.57 Station inspection.

The station and all records required to be kept by the licensee shall be made available for inspection upon request by any authorized representative of the Commission.

§ 78.59 Posting of station and operator licenses.

(a) The station license and any other instrument of authorization or individual order concerning the construction or the equipment or manner of operation shall be posted at the place where the transmitter is located, so that all terms thereof are visible except as otherwise provided in paragraphs (b) and (c) of this section.

(b) In cases where the transmitter is operated by remote control, the documents referred to in paragraph (a) of this section shall be posted in the manner described at the control point of the transmitter.

(c) In cases where the transmitter is operated unattended, the name of the licensee and the call sign of the unattended station shall be displayed at the transmitter site on the structure supporting the transmitting antenna, so as to be visible to a person standing on the ground at the transmitter site. The display shall be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition at all times by the licensee. The station license and other documents referred to in paragraph (a) of this section shall be kept at the nearest attended station or, in cases where the licensee of the unattended station does not operate attended stations, at the point of destination of the signals relayed by the unattended station.

(d) The original of each station operator license shall be posted at the place where the operator is on duty: *Provided, however,* That if the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing the class of station and is there available for inspection by a representative of the Commission, a verification card (FCC Form 78–F) is acceptable in lieu of the posting of such license: *And provided, further,* That if the operator on duty holds an operator permit of the card form (as distinguished from the diploma form), he shall not post that permit but shall keep it in his personal possession.

§ 78.61 Operator requirements.

(a) Except in cases where a cable television relay station is operated unattended in accordance with § 78.53, an operator holding a valid radiotelephone first- or second-class operator license shall be on duty at the place where the transmitting apparatus is located, in plain view and in actual charge of its operation or at a remote control point established pursuant to the provisions of § 78.51, at all times when the station is in operation. Control and monitoring equipment at a remote control point shall be readily accessible and clearly visible to the operator at that position.

(b) In cases where the cable television relay station is operated unattended pursuant to the provisions of § 78.53, the licensed personnel referred to in paragraph (a)(4) of that section shall hold a valid radiotelephone first- or second-class operator license.

(c) Any transmitter tests, adjustments, or repairs during or coincident with the installation, servicing, operation, or maintenance of a cable television relay station which may affect the proper operation of such station shall be made by or under the immediate supervision and responsibility of a person holding a valid first- or second-class radiotelephone operator license, who shall be fully responsible for proper functioning of the station equipment.

(d) The licensed operator on duty and in charge of a cable television relay station may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator license which he holds and the rules governing such stations. However, such duties shall in no way impair or impede the required supervision of the cable television relay station.

§ 78.63 Painting and lighting of antenna structures.

The painting and lighting of antenna structures employed by the stations licensed under this part, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter sets forth the conditions under which painting and lighting will be required and the responsibility of the licensee with regard thereto.

§ 78.65 Additional orders.

In case the rules of this part do not cover all phases of operation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

§ 78.67 Copies of rules.

The licensee of a cable television relay station shall have a current copy of this Part 78, and, in cases where aeronautical obstruction marking of antennas is required, Part 17 of this chapter shall be available for use by the operator in charge. Both the licensee and the operator or operators responsible for the proper operation of the station are expected to be familiar with the rules governing cable television relay stations. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at nominal cost.

§ 78.69 Operating log.

(a) The licensee of a cable television relay station shall maintain an operating log showing the following:

(1) The date and time of the beginning and end of each period of operation of each transmitter;

(2) The date and time of any unscheduled interruptions to the transmissions of the station, the duration of such interruptions, and the causes thereof;

(3) A record of repairs, adjustments, tests, maintenance, and equipment changes;

(4) Entries required by § 17.49 of this chapter concerning daily observations of tower lights and quarterly inspections of the condition of the tower lights and associated control equipment and an entry when towers are cleaned or repainted as required by § 17.50 of this chapter.

(b) Log entries shall be made in an orderly and legible manner by the person or persons competent to do so, having actual knowledge of the facts required, who shall sign the log when starting duty and again when going off duty.

(c) No log or portion thereof shall be erased, obliterated, or willfully destroyed within the period of retention required by rule. Any necessary correction may be made only by the person who made the original entry who shall strike out the erroneous portion, initial the correction made, and show the date the correction was made.

(d) Operating logs shall be retained for a period of not less than 2 years. The Commission reserves the right to order retention of logs for a longer period of time. In cases where the licensee has notice of any claim or complaint, the log shall be retained until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for filing of suits upon such claims.

§ 78.75 Equal employment opportunities.

See § 76.311 of this chapter.

[37 F.R. 6592, Mar. 31, 1972]

Subpart D—Technical Regulations

§ 78.101 Power limitations.

(a) Transmitter peak output power shall not be greater than necessary, and in any event, shall not exceed 5 watts on any channel; except that, stations using frequency modulation to transmit a baseband of frequency-division multiplexed standard television signals may be authorized to use peak power of 15 watts on frequency assignments in Groups E and F, 30 watts on frequency assignments in Group G, and 60 watts on assignments in Group H.

(b) LDS stations shall use for the visual signal either vestigial sideband AM transmission or frequency-division multiplexed FM transmission. When vestigial sideband AM transmission is used, the peak power of the visual signal on all channels shall be maintained within 2 decibels of equality. The mean power of the aural signals on each channel shall not exceed a level 7 decibels below the peak power of the visual signal.

§ 78.103 Emissions and bandwidth.

(a) A cable television relay station may be authorized to employ any type of emission, for which there are technical standards incorporated in Subpart D of this part, suitable for the simultaneous transmission of visual and aural television signals.

(b) Any emission appearing on a frequency outside of the channel authorized for a transmitter shall be attenuated below the peak power of emission in accordance with the following schedule:

(1) For CAR stations using FM transmission (including those modulated by a frequency-division baseband of standard television signals):

(i) On any frequency above the upper channel limit and below the lower channel limit by between zero and 50 percent of the assigned channel width: At least 25 decibels;

(ii) On any frequency above the upper channel limit or below the lower channel limit by more than 50 percent and up to 150 percent of the assigned channel width: At least 35 decibels; and

(iii) On any frequency above the upper channel limit or below the lower channel limit by more than 150 percent of the assigned channel width: At least $43+10 \log_{10}$ (power in watts) decibels.

(2) For CAR stations using vestigial sideband AM transmission: At least 50 decibels.

(c) In the event that interference to other stations is caused by emissions outside the authorized channel, the Commission may require greater attenuation than that specified in paragraph (b) of this section.

[37 F.R. 3292, Feb. 12, 1972, as amended at 37 F.R. 15927, Aug. 8, 1972]

§ 78.105 Antennas.

(a) Cable television relay stations shall use directive transmitting antennas. The maximum beamwidth in the horizontal plane between half power points of the major lobe shall not exceed 3°: *Provided, however,* That, upon adequate showing of need to serve a larger sector, or more than a single sector, greater beamwidth or multiple antennas may be authorized for LDS stations. Either vertical, horizontal, or elliptical polarization may be employed. The Commission reserves the right to specify the polarization of the transmitted signal.

(b) The choice of receiving antennas is left to the discretion of the licensee. However, licensees will not be protected from interference which results from the lack of adequate antenna discrimination against unwanted signals.

§ 78.107 Equipment and installation.

(a) From time to time the Commission publishes a revised list of type approved and type accepted equipment entitled "Radio Equipment List." Copies of this list are available for inspection at the Commission's offices in Washington, D.C., and at each of its field offices.

(b) Each transmitter authorized for use in the Cable Television Relay Service (other than a CAR pickup station) must be of a type that has been type accepted pursuant to Part 2 (Subpart F) of this chapter, as capable of meeting the requirements of §§ 78.17, 78.101, 78.103, 78.111, and 78.115.

(c) The installation of a cable television relay station shall be made by or under the immediate supervision of a qualified engineer. Any tests or adjustments requiring the radiation of signals and which could result in improper operation shall be conducted by or under the immediate supervision of an operator holding a valid first- or second-class radiotelephone operator license.

(d) Simple repairs such as the replacement of tubes, fuses, or other plug-in components which require no particular skill may be made by an unskilled person. Repairs requiring replacement of attached components or the adjustment of critical circuits or corroborative measurements shall be made only by a person with required knowledge and skill to perform such tasks.

[37 F.R. 3292, Feb. 12, 1972, as amended at 37 F.R. 15927, Aug. 8, 1972]

§ 78.109 Equipment changes.

(a) Formal application is required for any of the following changes:

(1) Replacement of the transmitter as a whole, except replacement with an identical transmitter, or any change in equipment which could result in a change in the electrical characteristics or performance of the station;

(2) Any change in the transmitting antenna system of a station (other than a CAR pickup station), including the direction of the main radiation lobe, directive pattern, antenna gain or transmission line;

(3) Any change in the height of the antenna of a station (other than a CAR pickup station) above ground, or any horizontal change in the location of the antenna;

(4) Any change in the transmitter control system;

(5) Any change in the location of a station transmitter (other than a CAR pickup station transmitter), except a move within the same building or upon the tower or mast or a change in the area of operation of a CAR pickup station;

(6) Any change in frequency assignment;

(7) Any change of authorized operation power.

(b) Other equipment changes not specifically referred to in paragraph (a) of this section may be made at the discretion of the licensee, provided that the Engineer in Charge of the radio district in which the station is located and the Commission in Washington, D.C., are notified in writing upon the completion of such changes and provided further, that the changes are appropriately reflected in the next application for renewal of licenses of the station.

§ 78.111 Frequency tolerance.

(a) The frequency of the unmodulated carrier as radiated by a cable television relay station using FM transmission (including those modulated by a frequency-division baseband of standard television signals) shall be maintained within 0.02 percent of the center of the assigned channel.

(b) The frequency of the visual carrier of a CAR station using vestigial sideband AM transmission shall be maintained within 0.0005 percent of the assigned frequency, and the center frequency of the accompanying aural signal shall be maintained 4.5 MHz±1 kHz above the visual frequency.

§ 78.113 Frequency monitors and measurements.

(a) Suitable means shall be provided to insure that the operating frequency is within the prescribed tolerance at all times. The operating frequency shall be checked as often as is necessary to insure compliance with § 78.111 and in any case at intervals of no more than 1 month.

(b) The choice of apparatus to measure the operating frequency is left to the discretion of the licensee. However, failure of the apparatus to detect departures of the operating frequency in excess of the prescribed tolerance will not be deemed an acceptable excuse for the violation.

§ 78.115 Modulation limits.

(a) If amplitude modulation is employed, negative modulation peaks shall not exceed 100 percent modulation.

(b) If frequency modulation is employed, carrier excursions shall be limited to the extent necessary to comply with the requirements of § 78.103 and shall in no event extend beyond the channel limits.

APPENDIX B

SIGNIFICANTLY VIEWED TELEVISION STATIONS

This table lists the television stations significantly for purposes of cable television carriage, in accordance with § 76.54(a) of the Commission's rules. All stations meeting the significant viewing test are listed, including market and other stations that might be subject to required or permissible carriage under other provisions of the rules.

Information in the table is derived from the American Research Bureau's 1971 Share of Hours Study for all counties with less than 10 percent cable television penetration and ARB's special study of Non-CATV Circulation and Share of Viewing Hours for those counties with between 10 percent and 90 percent cable television penetration. No data is shown for the following seven counties that are reported to have more than 90 percent cable penetration: El Dorado, Calif.; Northumberland, Montour, Pa.; Concho, Terrell, Tex.; Mineral, W. Va.; and Sweetwater, Wyo.

Cities, not politically part of any county, are listed with the county in which they were included for survey purposes. A description of how split counties have been divided is included after each State listing that includes split counties. The description indicates which Census County Divisions (1960) are included in each division of the county. Maps of Census County Divisions may be found in U.S. Census of Population: 1960, Vol. I, Characteristics of the Population, Part A, Number of Inhabitants.

SIGNIFICANTLY VIEWED SIGNALS

County	*Call letters, channel number, and market name*		
	ALABAMA		
Autauga	WSFA	12	Montgomery.
	WCOV	20	Do.
	WKAB	32	Do.
Baldwin	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Barbour	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
	WSFA	12	Montgomery.
Bibb	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
Blount	WBRC	6	Do.
	WAPI	13	Do.
	WHNT	19	Huntsville-Decatur-Florence.
Bullock	WSFA	12	Montgomery.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Butler	WSFA	12	Montgomery.
	WCOV	20	Do.
	WKAB	32	Do.
Calhoun	WBRC	6	Birmingham.
	WAPI	13	Do.
	WHMA	40	Anniston, Ala.
Chambers	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
	WSFA	12	Montgomery.
Cherokee	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WBRC	6	Birmingham.
Chilton	WBRC	6	Do.
	WAPI	13	Do.
	WBMG	42	Do.
	WSFA	12	Montgomery.
Choctaw	WTOK	11	Meridian.
Clarke	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Clay	WBRC	6	Birmingham.
	WAPI	13	Do.
	WRBL	3	Columbus, Ga.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ALABAMA—continued			
Cleburne	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WBRC	6	Birmingham.
	WAPI	13	Do.
Coffee	WTVY	4	Dothan.
	WSFA	12	Montgomery.
	WTVM	9	Columbus, Ga.
	WJHG	7	Panama City.
Colbert	WOWL	15	Huntsville-Decatur-Florence.
	WHNT	19	Do.
	WAAY	31	Do.
	WMSL	48	Do.
Conecuh	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
	WSFA	12	Montgomery.
Coosa	WBRC	6	Birmingham.
	WAPI	13	Do.
	WSFA	12	Montgomery.
Covington	WSFA	12	Do.
	WTVY	4	Dothan.
Crenshaw	WSFA	12	Montgomery.
	WCOV	20	Do.
	WTVY	4	Dothan.
Culiman	WBRC	6	Birmingham.
	WAPI	13	Do.
	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
Dale	WTVY	4	Dothan.
	WTVM	9	Columbus, Ga.
	WRBL	3	Do.
	WSFA	12	Montgomery.
Dallas	WSFA	12	Do.
	WCOV	20	Do.
	WKAB	32	Do.
	WBRC	6	Birmingham.
De Kalb	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WAGA	5	Atlanta.
	WBRC	6	Birmingham.
	WHNT	19	Huntsville-Decatur-Florence.
Elmore	WSFA	12	Montgomery.
	WCOV	20	Do.
	WKAB	32	Do.
Escambia	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Etowah	WBRC		Birmingham.
	WAPI	13	Do.
	WHMA	40	Anniston, Ala.
Fayette	WBRC	6	Birmingham.
	WAPI	13	Do.
	WCPI	4	Columbus, Miss.
Franklin	WHNT	19	Huntsville-Decatur-Florence.
	WBRC	6	Birmingham.
	WCBI	4	Columbus, Miss.
	WTWV	9	Tupelo.
Geneva	WTVY	4	Dothan.
	WDHN	18	Do.
	WJHG	7	Panama City.
Greene	WBRC	6	Birmingham.
	WAPI	13	Do.
	WTOK	11	Meridian.
	WCFT	33	Tuscaloosa.
Hale	WBRC	6	Birmingham.
	WAPI	13	Do.
	WTOK	11	Meridian.
	WCFT	33	Tuscaloosa.
Henry	WTVY	4	Dothan.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Houston	WTVY	4	Dothan.
	WDHN	18	Do.
	WJHG	7	Panama City.
Jackson	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Jefferson	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
Lamar	WCBI	4	Columbus, Miss.
	WBRC	6	Birmingham.
	WAPI	13	Do.
Lauderdale	WOWL	15	Huntsville-Decatur-Florence.
	WHNT	19	Do.
	WAAY	31	Do.
	WMSL	48	Do.
Lawrence	WHNT	19	Do.
	WAAY	31	Do.
	WMSL	48	Do.
	WBRC	6	Birmingham.
Lee	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSFA	12	Montgomery.
Limestone	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
Lowndes	WSFA	12	Montgomery.
	WCOV	20	Do.
	WKAB	32	Do.
Macon	WSFA	12	Do.
	WCOV	20	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Madison	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
Marengo	WTOK	11	Meridian.
Marion	WBRC	6	Birmingham.
	WAPI	13	Do.
	WCBI	4	Columbus, Miss.
Marshall	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
	WBRC	6	Birmingham.
	WAPI	13	Do.
Mobile	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Monroe	WEAR	3	Do.
	WKRG	5	Do.
	WALA	10	Do.
Montgomery	WSFA	12	Montgomery.
	WCOV	20	Do.
	WKAB	32	Do.
Morgan	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
	WBRC	6	Birmingham.
Perry	WBRC	6	Do.
	WAPI	13	Do.
	WSFA	12	Montgomery.
Pickens	WBRC	6	Birmingham.
	WAPI	13	Do.
	WCPI	4	Columbus, Miss.
Pike	WSFA	12	Montgomery.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
Randolph	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
ALABAMA—continued			
Russell	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WYEA	38	Do.
St. Clair	WBRC	6	Birmingham.
	WAPI	13	Do.
Shelby	WBRC	6	Do.
	WAPI	13	Do.
	WBMG	42	Do.
Sumter	WTOK	11	Meridian.
Talladega	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
Tallapoosa	WBRC	6	Do.
	WAPI	13	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSFA	12	Montgomery.
Tuscaloosa	WBRC	6	Birmingham.
	WAPI	13	Do.
	WCFT	33	Tuscaloosa.
Walker	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
Washington	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Wilcox	WSFA	12	Montgomery.
	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
Winston	WBRC	6	Birmingham.
	WAPI	13	Do.
	WBMG	42	Do.
	WHNT	19	Huntsville-Decatur-Florence.
ARIZONA			
Apache	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Cochise	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
Coconino	KOAI	2	Phoenix.
	KTVK	3	Do.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Gila	KTVK	3	Do.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Graham	KTAR	12	Do.
	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
Greenlee	KVOA	4	Do.
	KGUN	9	Do.
	KOLD	13	Do.
Maricopa	KTVK	3	Phoenix.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Mohave	KTVK	3	Do.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
	KORK	3	Las Vegas.
Navajo	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
	KOAI	2	Phoenix.
	KOOL	10	Do.
ARIZONA—continued			
Pima East	KVOA	4	Tucson.
	KGUN	9	Do.
	KZAZ	11	Do.
	KOLD	13	Do.
Pima West	KVOA	4	Do.
	KGUN	9	Do.
	KOLD	13	Do.
	KPHO	5	Phoenix.
Pinal	KTVK	3	Do.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
	KVOA	4	Tucson.
Santa Cruz	KVOA	4	Do.
	KGUN	9	Do.
	KZAZ	11	Do.
	KOLD	13	Do.
	KPHO	5	Phoenix.
	XHFA	2	Mexico
Yavapai	KTVK	3	Phoenix.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Yuma	KPHO	5	Do.
	KBLU	13	Yuma.
	KECC	9	El Centro.

Census County Divisions in Split Counties.
Pima West: Ajo, Papago.
Pima East: all other.

ARKANSAS			
Arkansas	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Ashley	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	KATV	7	Little Rock.
Baxter	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Benton	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
	KFSA	5	Ft. Smith.
	KOTV	6	Tulsa.
	KTUL	8	Do.
Boone	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
Bradley	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
	KTVE	10	Monroe-El Dorado.
Calhoun	KARK	4	Little Rock.
	KATV	7	Do.
	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Carroll	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
Chicot	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	WABG	6	Greenwood-Greenville.
	KATV	7	Little Rock.
Clark	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Clay	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KAIT	8	Jonesboro.
Cleburne	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Cleveland	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ARKANSAS—continued			
Columbia	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Conway	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Craighead	KAIT	8	Jonesboro.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Crawford	KFSA	5	Ft. Smith.
	KARK	8	Little Rock.
	KTHV	11	Do.
	KTUL	8	Tulsa.
Crittenden	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Cross	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Dallas	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Desha	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
	KTVE	10	Monroe-El Dorado.
Drew	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
	KTVE	10	Monroe-El Dorado.
Faulkner	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Franklin	KFSA	5	Ft. Smith.
	KARK	4	Little Rock.
	KTHV	11	Do.
	KTUL	8	Tulsa.
Fulton	KYTV	3	Springfield, Mo.
	KAIT	8	Jonesboro.
	KTHV	11	Little Rock.
Grant	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Garland	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Greene	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KAIT	8	Jonesboro.
Hempstead	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Hot Spring	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Howard	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
Independence	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Izard	KARK	4	Do.
	KTHV	11	Do.
	KYTV	3	Springfield, Mo.
Jackson	KARK	4	Little Rock.
	KHTV	11	Do.
	KAIT	8	Jonesboro.
	WREC	3	Memphis.
	WMC	5	Do.
Jefferson	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Johnson	KARK	4	Do.
	KTHV	11	Do.
	KFSA	5	Ft. Smith.
	KATV	7	Little Rock.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ARKANSAS—continued			
Lafayette	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Lawrence	KAIT	8	Jonesboro.
	WREC	3	Memphis.
	WMC	5	Do.
Lee	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
	KATV	7	Little Rock.
Lincoln	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Little River	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Logan	KFSA	5	Ft. Smith.
	KARK	4	Little Rock.
	KTHV	11	Do.
Lonoke	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Madison	KYTV	3	Springfield, Mo.
	KFSA	5	Ft. Smith.
	KODE	12	Joplin-Pittsburg.
Marion	KYTV	3	Springfield, Mo.
	KITS	10	Do.
	KMTC	27	Do.
	KARK	4	Little Rock.
	KTHV	11	Do.
Miller	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Mississippi	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Monroe	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Montgomery	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Nevada	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Newton	KYTV	3	Springfield, Mo.
	KARK	4	Little Rock.
	KTHV	11	Do.
Ouachita	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
	KTVE	10	Monroe-El Dorado.
Perry	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Phillips	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KATV	7	Little Rock.
Pike	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
Poinsett	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KAIT	8	Jonesboro.
Polk	KARK	4	Little Rock.
	KTHV	11	Do.
	KFSA	5	Ft. Smith.
	KTAL	6	Shreveport-Texarkana.
	KATV	7	Little Rock.
Pope	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	ARKANSAS—continued		
Prairie	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Pulaski	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Randolph	KAIT	8	Jonesboro.
	WREC	3	Memphis.
	WMC	5	Do.
St. Francis	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
	KATV	7	Little Rock.
Saline	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Scott	KFSA	5	Ft. Smith.
	KARK	4	Little Rock.
	KTUL	8	Tulsa.
Searcy	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
	KYTV	3	Springfield, Mo.
Sebastian	KFSA	5	Ft. Smith.
	KTUL	8	Tulsa.
Sevier	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Sharp	KAIT	8	Jonesboro.
	KARK	4	Little Rock.
	KTHV	11	Do.
	WMC	5	Memphis.
	KYTV	3	Springfield, Mo.
Stone	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Union	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	KATV	7	Little Rock.
	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
Van Buren	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Washington	KOTV	6	Tulsa.
	KTUL	8	Do.
	KFSA	5	Ft. Smith.
	KODE	12	Joplin-Pittsburg.
White	KARK	4	Little Rock.
	KATV	7	Do.
	KTHV	11	Do.
Woodruff	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
Yell	KARK	4	Do.
	KATV	7	Do.
	KTHV	11	Do.
	KFSA	5	Ft. Smith.
	CALIFORNIA		
Alameda East	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KGSC	36	Do.
Alameda West	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	CALIFORNIA—continued		
Alpine	KTVN	2	Reno.
	KCRL	4	Do.
	KOLO	8	Do.
Amador	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
Butte	KRCR	7	Chico-Redding.
	KHSL	12	Do.
	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
Calaveras	KCRA	3	Do.
	KXTV	10	Do.
	KOVR	13	Do.
Colusa	KCRA	3	Do.
	KXTV	10	Do.
	KOVR	13	Do.
	KRCR	7	Chico-Redding.
	KHSL	12	Do.
Contra Costa East.	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
	KTVU	2	San Francisco.
	KPIX	5	Do.
Contra Costa West.	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.
Del Norte	KIEM	3	Eureka.
	KVIQ	6	Do.
El Dorado East over 90 percent cable penetration.			
El Dorado West	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
Fresno	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
Glenn	KRCR	7	Chico-Redding.
	KHSL	12	Do.
Humboldt	KIEM	3	Eureka.
	KVIQ	6	Do.
Imperial	KECC	9	El Centro.
	KCOP	13	Los Angeles.
	KBLU	13	Yuma.
	XHBC	3	Mexico.
Inyo	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KOLO	8	Reno.
Kern East	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Kern West	KJTV	17	Bakersfield.
	KERO	23	Do.
	KBAK	29	Do.
Kings	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
	KERO	23	Bakersfield.
	KBAK	29	Do.
Lake	KCRA	3	Sacramento-Stockton.
	KOVR	13	Do.
	KTVU	2	San Francisco.
Lassen	KTVN	2	Reno.
	KCRL	4	Do.
	KOLO	8	Do.

Significantly Viewed Signals—Continued

County	Call letters, channel number, and market name		
CALIFORNIA—continued			
Los Angeles	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Madera	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
Marin	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Mariposa	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
	KOVR	13	Sacramento-Stockton.
Mendocino	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KIEM	3	Eureka.
Merced	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
Modoc	KRCR	7	Chico-Redding.
	KOTI	2	Klamath Falls.
	KMED	10	Medford.
	KOLO	8	Reno.
Mono	KOLO	8	Do.
	KCRA	3	Sacramento-Stockton.
	KPIX	5	San Francisco.
	KGO	7	Do.
	KTVU	2	Do.
Monterey East	KSBW	8	Salinas-Monterey.
	KNTV	11	Do.
	KMST	46	Do.
	KTVU	2	San Francisco.
Monterey West	KSBW	8	Salinas-Monterey.
	KNTV	11	Do.
	KMST	46	Do.
	KTVU	2	San Francisco.
Napa North	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Napa South	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
Nevada East	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KOLO	8	Reno.
	KTVU	2	San Francisco.
Nevada West	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
Orange North	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Orange South	KNXT	2	Do.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Placer East	KOLO	8	Reno.
Placer West	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
Plumas	KCRA	3	Do.
	KTXL	40	Do.
	KHSL	12	Chico-Redding.
Riverside East	KTVK	3	Phoenix.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
Riverside West	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Riverside Central.	KNXT	2	Do.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Sacramento	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
San Benito	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KSBW	8	Salinas-Monterey.
	KNTV	11	Do.
San Bernardino East.	KTVK	3	Phoenix.
	KPHO	5	Do.
	KOOL	10	Do.
	KTAR	12	Do.
San Bernardino West.	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
San Diego	XETV	6	San Diego.
	KFMB	8	Do.
	KOGO	10	Do.
	KCST	39	Do.
	KCOP	13	Los Angeles.
	KNBC	4	Do.
San Francisco	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
San Joaquin	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
San Luis Obispo.	KSBY	6	Salinas-Monterey.
	KEYT	3	Santa Barbara-Santa Maria.
	KCOY	12	Do.
San Mateo	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.
Santa Barbara North.	KEYT	3	Santa Barbara-Santa Maria.
	KCOY	12	Do.
	KSBY	6	Salinas-Monterey.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
CALIFORNIA—continued			
Santa Barbara South	KEYT	3	Santa Barbara-Santa Maria.
	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Santa Clara East.	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.
	KSBW	8	Salinas-Monterey.
	KNTV	11	Do.
	KMST	46	Do.
Santa Clara West.	KTVU	2	San Francisco.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
	KEMO	20	Do.
	KBHK	44	Do.
	KNTV	11	Salinas-Monterey.
Santa Cruz	KSBW	8	Do.
	KNTV	11	Do.
	KMST	46	Do.
	KTVU	2	San Francisco.
Shasta	KRCR	7	Chico-Redding.
	KHSL	12	Do.
Sierra	KCRL	4	Reno.
	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KTVU	2	San Francisco.
	KRON	4	Do.
Siskiyou	KRCR	7	Chico-Redding.
	KHSL	12	Do.
	KMED	10	Medford.
Solano East	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
	KTVU	2	San Francisco.
	KPIX	5	Do.
	KGO	7	Do.
	KRON	4	Do.
Solano West	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Sonoma North	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Sonoma South	KTVU	2	Do.
	KRON	4	Do.
	KPIX	5	Do.
	KGO	7	Do.
Stanislaus	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
Sutter	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
	KHSL	12	Chico-Redding.
	KTVU	2	San Francisco.
	KBHK	44	Do.
Tehama	KRCR	7	Chico-Redding.
	KHSL	12	Do.
Trinity	KRCR	7	Do.
	KHSL	12	Do.
Tulare	KMJ	24	Fresno.
	KFRE	30	Do.
	KJEO	47	Do.
	KJTV	17	Bakersfield.
	KERO	23	Do.
	KBAK	29	Do.
Tuolumne	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KSBW	8	Salinas-Monterey.
	KTVU	2	San Francisco.
	KRON	4	Do.
Ventura	KNXT	2	Los Angeles.
	KNBC	4	Do.
	KTLA	5	Do.
	KABC	7	Do.
	KHJ	9	Do.
	KTTV	11	Do.
	KCOP	13	Do.
Yolo	KCRA	3	Sacramento-Stockton.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
Yuba	KCRA	3	Do.
	KXTV	10	Do.
	KOVR	13	Do.
	KTXL	40	Do.
	KHSL	12	Chico-Redding.

Census county divisions in split counties:

Alameda East: Livermore, Pleasanton.
Alameda West: All other.
Contra Costa East: Ambrose, Antioch, Brentwood-Bryon, Clayton-Tassajara, Martinez, Oakley-Bethel, Pittsburg, Pleasant Hill, Port Chicago.
Contra Costa West: All other.
El Dorado East: Lake Valley.
El Dorado West: All other.
Kern East: East Kern, Tehachapi.
Kern West: All other.
Monterey West: Carmel, Carmel Valley, Ford Ord, Monterey, Monterey Penin., Pacific Grove, Seaside.
Monterey East: All other.
Napa North: Angwin, Berryessa, Calistoga, St. Helena.
Napa South: All other.
Nevada East: Donner.
Nevada West: All other.
Orange North: Anaheim-Garden Grove, Buena Park-Cypress, Fullerton-La Habra, Santa Ana Canyon, Santa Ana-Orange.
Orange South: All other.
Placer East: Lake Tahoe.
Placer West: All other.
Riverside East: Palo Verde.
Riverside Central: Cathedral City-Palm Desert, Chuckwalla, Coachella Valley, Desert Hot Springs, Idyllwild, Palm Springs, San Gorgonio Pass.
Riverside West: All other.
San Bernardino East: Needles.
San Bernardino West: All other.
Santa Barbara North: Cuyama, Guadalupe, Lompoc Valley, Santa Maria, Santa Maria Valley, Santa Ynez Valley.
Santa Barbara South: All other.
Santa Clara East: Diablo Range, Gilroy, Llagas-Uvas, Morgan Hill, San Martin.
Santa Clara West: All other.
Solano East: Dixon, Fairfield-Suisun, Rio Vista, Vacaville.
Solano West: All other.
Sonoma South: Petaluma, Petaluma Rural, Sonoma.
Sonoma North: All other.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	COLORADO		
Adams	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Alamosa	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
	KRDO	13	Colorado Springs-Pueblo.
Arapahoe	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Archuleta	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Baca	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Bent	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
Boulder	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Chaffee	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KOAA	5	Colorado Springs-Pueblo.
Cheyenne	KAYS	7	Wichita-Hutchinson.
	KKTV	11	Colorado Springs-Pueblo.
	KRDO	13	Do.
Clear Creek	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Conejos	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Costilla	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Crowley	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Custer	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
Delta	KREX	5	Grand Junction.
	KREY	10	Do.
	KBTV	9	Denver.
Denver	KWGN	2	Do.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Dolores	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Douglas	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KRDO	13	Colorado Springs-Pueblo.
Eagle	KOA	4	Denver.
	KLZ	7	Do.
	KBTV	9	Do.
Elbert	KWGN	2	Do.
	KOA	4	Do.
	KLZ	7	Do,
	KBTV	9	Do.
	KKTV	11	Colorado Springs-Pueblo.
	KRDO	13	Do.
El Paso	KOAA	5	Colorado Springs-
	KKTV	11	Pueblo,
	KRDO	13	Do.
Fremont	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
Garfield	KREX	5	Grand Junction.
	KOA	4	Denver.
Gilpin	KWGN	2	Do.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Grand	KWGN	2	Do.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Gunnison	KOAA	5	Colorado Springs-Pueblo.
	KBTV	9	Denver.
	KREX	5	Grand Junction.
	KREY	10	Do.
Hinsdale	KREX	5	Do.
	KOAA	5	Colorado Springs-Pueblo.
Huerfano	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
Jackson	KOA	4	Denver.
	KFBC	5	Cheyenne.
Jefferson	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Kiowa	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
	KAYS	7	Wichita-Hutchinson.
Kit Carson	KAYS	7	Do.
Lake	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
La Plata	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
	KREZ	6	Grand Junction.
Larimer	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KFBC	5	Cheyenne.
Las Animas	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Lincoln	KOAA	5	Do.
	KKTV	11	Do.
	KRDO	13	Do.
	KWGN	2	Denver.
	KOA	4	Do.
Logan	KTVS	3	Cheyenne.
Mesa	KREX	5	Grand Junction.
Mineral	KOAA	5	Colorado Springs-Pueblo.
	KOAT	7	Albuquerque.
	KGGM	13	Do.
Moffat	KOA	4	Denver.
	KLZ	7	Do.
	KBTV	9	Do.
Montezuma	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Montrose	KREY	10	Grand Junction.
	KOAA	5	Colorado Springs-Pueblo.
	KBTV	9	Denver.
	KUTV	2	Salt Lake City.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
COLORADO—continued			
Morgan	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KTVS	3	Cheyenne.
Otero	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Ouray	KREX	5	Grand Junction.
Park	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Phillips	KTVS	3	Cheyenne.
	KHOL	13	Lincoln-Hastings-Kearney.
Pitkin	KREX	5	Grand Junction.
Prowers	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
	KGLD	11	Wichita-Hutchinson.
Pueblo	KOAA	5	Colorado Springs-Pueblo.
	KKTV	11	Do.
	KRDO	13	Do.
Rio Blanco	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Rio Grande	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
	KOAA	5	Colorado Springs-Pueblo.
Routt	KOA	4	Denver.
	KLZ	7	Do.
	KBTV	9	Do.
Saguache	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
	KOAA	5	Colorado Springs-Pueblo.
San Juan	KREX	5	Grand Junction.
San Miguel	KREX	5	Do.
Sedgwick	KTVS	3	Cheyenne.
	KHOL	13	Lincoln-Hastings-Kearney.
	KNOP	2	North Platte.
Summit	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Teller	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KKTV	11	Colorado Springs. Pueblo.
	KRDO	13	Do.
Washington	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
	KTVS	3	Cheyenne.
Weld	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Yuma	KAYS	7	Wichita-Hutchinson
	KOMC	8	Do.
	KTVS	3	Cheyenne.
	KHOL	13	Lincoln-Hastings-Kearney.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
CONNECTICUT			
Fairfield	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WNHC	8	Hartford-New Haven.
Hartford	WTIC	3	Do.
	WNHC	8	Do.
	WHCT	18	Do.
	WHNB	30	Do.
Litchfield	WTIC	3	Do.
	WNHC	8	Do.
	WHNB	30	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WPIX	11	Do.
Middlesex	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
	WHNB	30	Do.
	WNEW	5	New York.
New Haven	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
New London	WTEV	6	Providence.
	WJAR	10	Do.
	WPPI	12	Do.
	WHDH	5	Boston.
	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
Tolland	WTIC	3	Do.
	WNHC	8	Do.
	WHNB	30	Do.
	WBZ	4	Boston.
	WHYN	40	Springfield, Mass.
Windham	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
DELAWARE			
Kent	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
New Castle	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Sussex	WBOC	16	Salisbury.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
DISTRICT OF COLUMBIA			
District of Columbia.	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
FLORIDA			
Alachua	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WESH	2	Orlando-Daytona Beach.
Baker	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Bay	WJHG	7	Panama City.
	WTVY	4	Dothan.
Bradford	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Brevard	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Broward	WTVJ	4	Miami.
	WCKT	7	Do.
	WPLG	10	Do.
	WAJA	23	Do.
	WPTV	5	West Palm Beach.
	WEAT	12	Do.
Calhoun	WJHG	7	Panama City.
	WTVY	4	Dothan.
	WCTV	6	Tallahassee.
Charlotte	WFLA	8	Tampa-St. Petersburg.
	WTVT	13	Do.
	WINK	11	Fort Myers.
Citrus	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WFSH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Clay	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Collier	WINK	11	Fort Myers.
	WBBH	20	Do.
	WCIX	6	Miami.
	WPLG	10	Do.
	WTVJ	4	Do.
Columbia	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Dade	WTVJ	4	Miami.
	WCIX	6	Do.
	WCKT	7	Do.
	WPLG	10	Do.
		13	Do.
De Soto	WFLA	8	Tampa-St. Petersburg.
	WTVT	13	Do.
	WTOG	44	Do.
	WINK	11	Fort Myers.
Dixie	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WESH	2	Orlando-Daytona Beach.
	WCTV	6	Tallahassee.
	WLCY	10	Tampa-St. Petersburg.
Duval	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Escambia	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
FLORIDA—continued			
Flagler	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
	WJXT	4	Jacksonville, Fla.
Franklin	WCTV	6	Tallahassee.
	WJHG	7	Panama City.
Gadsden	WCTV	6	Tallahassee.
	WTVY	4	Dothan.
	WJHG	7	Panama City.
Gilchrist	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WESH	2	Orlando-Daytona Beach.
Glades	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WINK	11	Fort Myers.
	WTVJ	4	Miami.
Gulf	WJHG	7	Panama City.
	WTVY	4	Dothan.
	WCTV	6	Tallahassee.
Hamilton	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Hardee	WFLA	8	Tampa-St. Petersburg.
	WTVT	13	Do.
	WTOG	44	Do.
Hendry	WINK	11	Fort Myers.
	WBBH	20	Do.
	WTVJ	4	Miami.
	WCIX	6	Do.
	WPLG	10	Do.
	WCKT	7	Do.
	WPTV	5	West Palm Beach.
	WEAT	12	Do.
Hernando	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Highlands	WFLA	8	Do.
	WTVT	13	Do.
	WINK	11	Fort Myers.
Hillsborough	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Holmes	WTVY	4	Dothan.
	WJHG	7	Panama City.
Indiana River	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WTVX	34	Fort Pierce-Vero Beach.
Jackson	WTVY	4	Dothan.
	WJHG	7	Panama City.
	WCTV	6	Tallahassee.
Jefferson	WCTV	6	Do.
	WALB	10	Albany, Ga.
Layfayette	WCTV	6	Tallahassee.
Lake	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
	WTOG	44	Tampa-St. Petersburg.
Lee	WINK	11	Fort Myers.
	WBBH	20	Do.
Leon	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
	WJHG	7	Panama City.
Levy	WESH	2	Orlando-Daytona Beach.
	WFTV	9	Do.
	WJXT	4	Jacksonville, Fla.
	WLCY	10	Tampa-St. Petersburg.
	WTVT	13	Do.
Liberty	WCTV	6	Tallahassee.
	WJHG	7	Panama City.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
FLORIDA—continued			
Madison	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Manatee	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Marion	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Martin	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WTVJ	4	Miami.
Monroe	WTVJ	4	Do.
	WCIX	6	Do.
	WCKT	7	Do.
	WPLG	10	Do.
Nassau	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Okaloosa	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
	WJHG	7	Panama City.
Okeechobee	WPTV	5	West Palm Beach.
	WEAT	12	Do.
Orange	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Osceola	WESH	2	Do.
	WDBO	6	Do.
	WFTV	9	Do.
Palm Beach	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WTVJ	4	Miami.
	WCKT	7	Do.
	WPLG	10	Do.
Pasco	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Pinellas	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Polk	WFLA	8	Do.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
	WDBO	6	Orlando-Daytona Beach.
	WFTV	9	Do.
Putnam	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
St. Johns	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
St. Lucie	WPTV	5	West Palm Beach.
	WEAT	12	Do.
	WTVX	34	Fort Pierce-Vero Beach.
Santa Rosa	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
Sarasota	WFLA	8	Tampa-St. Petersburg.
	WLCY	10	Do.
	WTVT	13	Do.
	WTOG	44	Do.
Seminole	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Sumter	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
	WFLA	8	Tampa-St. Petersburg.
	WTVT	13	Do.
Suwannee	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WCTV	6	Tallahassee.
Taylor	WCTV	6	Do.
Union	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Volusia	WESH	2	Orlando-Daytona Beach.
	WDBO	6	Do.
	WFTV	9	Do.
Wakulla	WCTV	6	Tallahassee.
	WJHG	7	Panama City.
Walton	WJHG	7	Do.
	WTVY	4	Dothan.
	WEAR	3	Mobile-Pensacola.
Washington	WTVY	4	Dothan.
	WJHG	7	Panama City.
GEORGIA			
Appling	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
	WJBF	6	Augusta.
	WJXT	4	Jacksonville, Fla.
	WCSC	5	Charleston, S.C.
Atkinson	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Bacon	WALB	10	Albany, Ga.
	WJXT	4	Jacksonville, Fla.
	WSAV	3	Savannah.
Baker	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
	WCTV	6	Tallahassee.
Baldwin	WMAZ	13	Macon.
	WSB	2	Atlanta.
	WAGA	5	Do.
Banks	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
Barrow	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
Bartow	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Ben Hill	WALB	10	Albany, Ga.
	WMAZ	13	Macon.
Berrien	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Bibb	WMAZ	13	Macon.
	WCWB	41	Do.
	WSB	2	Atlanta.
	WTVM	9	Columbus, Ga.
Bleckley	WMAZ	13	Macon.
Brantley	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Brooks	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Bryan	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
GEORGIA—continued			
Bulloch	WSAV	3	Savannah.
	WTOC	11	Do.
	WJBF	6	Augusta.
	WRDW	12	Do.
Burke	WJBF	6	Augusta.
	WRDW	12	Do.
Butts	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Calhoun	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
	WCTV	6	Tallahassee.
Camden	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Candler	WJBF	6	Augusta,
	WRDW	12	Do.
	WSAV	3	Savannah.
	WTOC	11	Do.
Carroll	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Catoosa	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Charlton	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WJKS	17	Do.
Chatham	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
Chattahoochee	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Chattooga	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Cherokee	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Clarke	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WFBC	4	Greenville-Spartanburg-Ashville.
Clay	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WTVY	4	Dothan.
Clayton	WSB	2	Atlanta
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Clinch	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Cobb	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Coffee	WALB	10	Albany, Ga.
Colquitt	WALB	10	Do.
	WCTV	6	Tallahassee.
Columbia	WJBF	6	Augusta.
	WRDW	12	Do.
	WATU	26	Do.
Cook	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
GEORGIA—continued			
Coweta	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Crawford	WMAZ	13	Macon.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSB	2	Atlanta.
Crisp	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
	WMAZ	13	Macon.
Dade	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Dawson	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Decatur	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
	WTVY	4	Dothan.
De Kalb	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Dodge	WMAZ	13	Macon.
	WALB	10	Albany, Ga.
Dooly	WMAZ	13	Macon.
	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Dougherty	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WCTV	6	Tallahassee.
Douglas	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Early	WTVY	4	Dothan.
	WTVM	9	Columbus, Ga.
	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Echols	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Effingham	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
Elbert	WFBC	4	Greenville-Spartanburg- Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WJBF	6	Augusta.
Emanuel	WJBF	6	Do.
	WRDW	12	Do.
Evans	WSAV	3	Savannah.
	WTOC	11	Do.
	WJBF	6	Augusta.
Fannin	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WATL	36	Do.
Fayette	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Floyd	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

GEORGIA—continued

County	Call letters, channel number, and market name		
Forsyth	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Franklin	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Fulton	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Gilmer	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Glascock	WJBF	6	Augusta.
	WRDW	12	Do.
Glynn	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Gordon	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
Grady	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Greene	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WJBF	6	Augusta.
Gwinnett	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Habersham	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
Hall	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Hancock	WJBF	6	Augusta.
	WRDW	12	Do.
	WMAZ	13	Macon.
Haralson	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Harris	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSB	2	Atlanta.
Hart	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Heard	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Henry	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Houston	WMAZ	13	Macon.
	WCWB	41	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

GEORGIA—continued

County	Call letters, channel number, and market name		
Irwin	WALB	10	Albany, Ga.
	WTVM	9	Columbus, Ga.
	WCTV	6	Tallahassee.
Jackson	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
Jasper	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
	WMAZ	13	Macon.
Jeff Davis	WALB	10	Albany, Ga.
	WJXT	4	Jacksonville, Fla.
	WSAV	3	Savannah.
	WTOC	11	Do.
Jefferson	WJBF	6	Augusta.
	WRDW	12	Do.
Jenkins	WJBF	6	Do.
	WRDW	12	Do.
Johnson	WMAZ	13	Macon.
	WJBF	6	Augusta.
	WRDW	12	Do.
Jones	WMAZ	13	Macon.
	WCWB	41	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Lamar	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WMAZ	13	Macon.
Lanier	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Laurens	WMAZ	13	Macon.
	WCWB	41	Do.
Lee	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
Liberty	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
Lincoln	WJBF	6	Augusta.
	WRDW	12	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
Long	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
Lowndes	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Lumpkin	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
McDuffie	WJBF	6	Augusta.
	WRDW	12	Do.
McIntosh	WSAV	3	Savannah.
	WTOC	11	Do.
	WJXT	4	Jacksonville, Fla.
Macon	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
	WMAZ	13	Macon.
Madison	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Marion	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Meriwether	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	GEORGIA—continued		
Miller	WTVY	4	Dothan.
	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Mitchell	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Monroe	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WMAZ	13	Macon.
Montgomery	WMAZ	13	Do.
	WJBF	6	Augusta.
	WSAV	3	Savannah.
	WTOC	11	Do.
Morgan	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Murray	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
Muscogee	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WYEA	38	Do.
Newton	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Oconee	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
Oglethorpe	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
	WJBF	6	Augusta.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Paulding	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Peach	WMAZ	3	Macon.
	WCWB	41	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Pickens	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Pierce	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Pike	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Polk	WSB	2	Do.
	WAGA	5	Do.
	WQXI	11	Do.
Pulaski	WMAZ	13	Macon.
	WRBL	3	Columbus, Ga.
Putnam	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WMAZ	13	Macon.
Quitman	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSFA	12	Montgomery.
Rabun	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Randolph	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
	WTVY	4	Dothan.
Richmond	WJBF	6	Augusta.
	WRDW	12	Do.
	WATU	26	Do.
Rockdale	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Schley	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
Screven	WJBF	6	Augusta.
	WRDW	12	Do.
	WSAV	3	Savannah.
	WTOC	11	Do.
Seminole	WTVY	4	Dothan.
	WALB	10	Albany, Ga.
	WCTV	6	Tallahassee.
Spalding	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WATL	36	Do.
Stephens	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Stewart	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Sumter	WRBL	3	Do.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
Talbot	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Taliaferro	WJBF	6	Augusta.
	WRDW	12	Do.
	WAGA	5	Atlanta
Tattnall	WSAV	3	Savannah.
	WTOC	11	Do.
Taylor	WRBL	3	Columbus, Ga
	WTVM	9	Do.
	WMAZ	13	Macon.
Telfair	WALB	10	Albany, Ga.
	WMAZ	13	Macon.
Terrell	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WALB	10	Albany, Ga.
Thomas	WCTV	6	Tallahassee.
	WALB	10	Albany, Ga.
Tift	WALB	10	Do.
	WCTV	6	Tallahassee.
Toombs	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
	WJBF	6	Augusta.
	WRDW	12	Do.
Towns	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WRCB	3	Chattanooga.
Treutlen	WMAZ	13	Macon.
	WJBF	6	Augusta.
	WRDW	12	Do.
Troup	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Turner	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WCTV	6	Tallahassee.

SIGNIFICANTLY VIEWED SIGNALS—Continued

GEORGIA—continued

County	*Call letters, channel number, and market name*		
Twiggs	WMAZ	13	Macon.
	WCWB	41	Do.
Union	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WRCB	3	Chattanooga.
Upson	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
	WMAZ	13	Macon.
Walker	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Walton	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
	WTCG	17	Do.
	WATL	36	Do.
Ware	WJXT	4	Jacksonville, Fla.
	WFGA	12	Do.
Warren	WJBF	6	Augusta.
	WRDW	12	Do.
	WATU	26	Do.
Washington	WJBF	6	Do.
	WRDW	12	Do.
	WMAZ	13	Macon.
Wayne	WSAV	3	Savannah.
	WTOC	11	Do.
	WJCL	22	Do.
	WJXT	4	Jacksonville, Fla.
Webster	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Wheller	WMAZ	13	Macon.
	WJBF	6	Augusta.
White	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Whitfield	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
Wilcox	WMAZ	13	Macon.
	WALB	10	Albany, Ga.
	WRBL	3	Columbus, Ga.
	WTVM	9	Do.
Wilkes	WJBF	6	Augusta.
	WRDW	12	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
Wilkinson	WMAZ	13	Macon.
	WCWB	41	Do.
Worth	WALB	10	Albany, Ga.
	WTVM	9	Columbus, Ga.
	WCTV	6	Tallahassee.
	WRBL	3	Columbus.

HAWAII

County	*Call letters, channel number, and market name*		
Hawaii 1	KHON	2	Honolulu.
	KHVH	4	Do.
	KGMB	9	Do.
Hawaii 2	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
Hawaii 3	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
Hawaii 4	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
Hawaii 5	KHVH	4	Do.
Honolulu 1	KHON	2	Honolulu.
	KHVH	4	Do.
	KGMB	9	Do.
Honolulu 2	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
	KIKU	13	Do.
Honolulu 3	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
Honolulu 4	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
	KIKU	13	Do.
Kauai	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
Maui 1	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
	KIKU	13	Do.
Maui 2	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
Maui 3	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.
Maui 4	KHON	2	Do.
	KHVH	4	Do.
	KGMB	9	Do.

Census county divisions in split counties:
Hawaii 1: North Kona, South Kona.
Hawaii 2: Keaau-Mountain View, Pahoa-Kalapana.
Hawaii 3: Hilo, North Hilo, Papaikow-Wailea.
Hawaii 4: Honokaa-Kukuihaela, North Hohala, Paauhau-Paauilio, South Kohala.
Hawaii 5: Kau.
Honolulu 1: Koolaupoko.
Honolulu 2: Koolauloa, Waialua, Wahiawa.
Honolulu 3: Waianae.
Honolulu 4: Ewa, Honolulu.
Maui 1: Lahaina, Lanai City.
Maui 2: Kahaului, Kihei, Puunene, Sprecklesville Waihee-Waikapu, Wailuku.
Maui 3: Haiku-Pauwela, Hana, Kula, Makawao-Paia.
Maui 4: East Molokai, West Molokai, Kalawao.

IDAHO

County	*Call letters, channel number, and market name*		
Ada	KBOI	2	Boise.
	KTVB	7	Do.
Adams	KBOI	2	Do.
	KTVB	7	Do.
Bannock	KID	3	Idaho Falls-Pocatello.
	KTLE	6	Do.
	KIFI	8	Do.
Bear Lake	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Benewah	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Bingham	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Blaine	KMVT	11	Twin Falls.
	KID	3	Idaho Falls-Pocatello.
Boise	KBOI	2	Boise.
	KTVB	7	Do.
Bonner	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
IDAHO—continued			
Bonneville	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Boundary	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Butte	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Camas	KMVT	11	Twin Falls.
Canyon	KBOI	2	Boise.
	KTVB	7	Do.
Caribou	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Cassia	KMVT	11	Twin Falls.
	KID	3	Idaho Falls-Pocatello.
	KTLE	6	Do.
	KIFI	8	Do.
Clark	KID	3	Do.
	KIFI	8	Do.
Clearwater	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KLEW	3	Yakima.
Custer	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Elmore	KBOI	2	Boise.
	KTVB	7	Do.
Franklin	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Fremont	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Gem	KBOI	2	Boise.
	KTVB	7	Do.
Gooding	KMVT	11	Twin Falls.
	KBOI	2	Boise.
	KTVB	7	Do.
Idaho	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KLEW	3	Yakima.
Jefferson	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Jerome	KMVT	11	Twin Falls.
Kootenai	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Latah	KREM	2	Do.
	KXLY	4	Do.
	KHQ	6	Do.
	KLEW	3	Yakima.
Lemhi	KID	3	Idaho Falls-Pocatello.
	KGVO	13	Missoula.
Lewis	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Lincoln	KMVT	11	Twin Falls.
Madison	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Minidoka	KMVT	11	Twin Falls.
	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Nez Perce	KLEW	3	Yakima.
	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Oneida	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Owyhee	KBOI	2	Boise.
	KTVB	7	Do.
Payette	KBOI	2	Do.
	KTVB	7	Do.
Power	KID	3	Idaho Falls-Pocatello.
	KTLE	6	Do.
	KIFI	8	Do.
Shoshone	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Teton	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Twin Falls	KMVT	11	Twin Falls.
	KTVB	7	Boise.
Valley	KBOI	2	Do.
	KTVB	7	Do.
Washington	KBOI	2	Do.
	KTVB	7	Do.
ILLINOIS			
Adams	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Alexander	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Bond	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Boone	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
	WGN	9	Chicago.
Brown	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Bureau	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WGN	9	Chicago.
Calhoun	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Carroll	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WREX	13	Rockford.
Cass	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
	WMBD	31	Peoria.
	WICS	20	Springfield-Decatur-Champaign
	WIRL	19	Peroia.
Champaign	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
Christian	WCIA	3	Do.
	WAND	17	Do.
	WICS	20	Do.
Clark	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
Clay	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
	KMOX	4	St. Louis.
Clinton	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ILLINOIS—continued			
Coles	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Cook	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Crawford	WTWO	2	Terre Haute.
	WTHI	10	Do.
Cumberland	WTWO	2	Do.
	WTHI	10	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
De Kalb	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
De Witt	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
	WICS	20	Do.
	WEEK	25	Peoria.
Douglas	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
Dupage	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Edgar	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
	WCIA	3	Springfield-Decatur-Champaign.
Edwards	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Effingham	WCIA	3	Springfield-Decatur-Champaign.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Fayette	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Ford	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
Franklin	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Fulton	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
Gallatin	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Greene	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Grundy	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Hamilton	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WTVW	7	Evansville.
Hancock	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Hardin	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Henderson	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Henry	WHBF	4	Do.
	WOC	6	Do.
	WQAD	8	Do.
Iroquois	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Jackson	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	KPLR	11	St. Louis.
Jasper	WTWO	2	Terre Haute.
	WTHI	10	Do.
Jefferson	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Jersey	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Jo Daviess	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WISC	3	Madison.
	WREX	13	Rockford.
	WTVO	17	Do.
Johnson	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Kane	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Kankakee	WBBM	2	Do.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Kendall	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ILLINOIS—continued			
Knox	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
Lake	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
La Salle	WBBM	2	Do.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WEEK	25	Peoria.
Lawrence	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
Lee	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WGN	9	Chicago.
	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
Livingston	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
	WCIA	3	Springfield-Decatur-Champaign.
Logan	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
	WICS	20	Do.
McDonough	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
McHenry	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
McLean	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
Macon	WCIA	3	Do.
	WAND	17	Do.
	WICS	20	Do.
Macoupin	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Madison	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ILLINOIS—continued			
Marion	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Marshall	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
Mason	WIRL	19	Do.
	WEEK	25	Do.
	WMBD	31	Do.
Massac	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Menard	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
	WAND	17	Springfield-Decatur-Champaign.
	WICS	20	Do.
Mercer	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Monroe	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Montgomery	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	WICS	20	Springfield-Decatur-Champaign.
Morgan	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
	KTVI	2	St. Louis.
	KPLR	11	Do.
	WICS	20	Springfield-Decatur-Champaign.
Moultrie	WCIA	3	Do.
	WICD	15	Do.
	WAND	17	Do.
	WICS	20	Do.
Ogle	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
Peoria	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
Perry	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	KFVS	11	Do.
Piatt	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
	WICS	20	Do.
Pike	KHQA	7	Qunicy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
	KTVI	2	St. Louis.
	KSD	5	Do.
	KPLR	11	Do.
Pope	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
ILLINOIS—continued			
Pulaski	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	
	KFVS	12	
Putnam	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Randolph	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Richland	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
Rock Island	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
St. Clair	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Saline	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Sangamon	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
	WICS	20	Do.
Schuyler	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Scott	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
	KTVI	2	St. Louis.
	KSD	5	Do.
	KPLR	11	Do.
Shelby	WCIA	3	Springfield-Decatur-Champaign.
	WAND	17	Do.
	WICS	20	Do.
Stark	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
Stephenson	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
	WISC	3	Madison.
Tazewell	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
Union	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Vermilion	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WAND	17	Do.
	WTWO	2	Terre Haute.
Wabash	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Warren	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Washington	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Wayne	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
White	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
Whiteside	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Will	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Williamson	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Winnebago	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
Woodford	WIRL	19	Peoria.
	WEEK	25	Do.
	WMBD	31	Do.
INDIANA			
Adams	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Allen	WANE	15	Do.
	WPTA	21	Do.
	WKJG	33	Do.
Bartholomew	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Benton	WTTV	4	Do.
	WFBM	6	Do.
	WLWI	13	Do.
	WGN	9	Chicago.
	WLFI	18	Lafayette, Ind.
	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
Blackford	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
one	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

INDIANA—continued

County	*Call letters, channel number, and market name*		
Brown	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Carroll	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WLFI	18	Lafayette, Ind.
Cass	WFBM	6	Indianapolis.
	WISH	8	Do.
	WLWI	13	Do.
	WLFI	18	Lafayette, Ind.
Clark	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Clay	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Clinton	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Crawford	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTVW	7	Evansville.
Daviess	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
	WTTV	4	Indianapolis.
Dearborn	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Decatur	WTTV		Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
De Kalb	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Delaware	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Dubois	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WTTV	4	Indianapolis.
	WAVE	3	Louisville.
	WHAS	11	Do.
	WTWO	2	Terra Haute.
	WTHI	10	Do.
Elkhart	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Fayette	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WHIO	7	Dayton.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
Floyd	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Fountain	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Franklin	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WTTV	4	Indianapolis.
Fulton	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Gibson	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Grant	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Greene	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
Hamilton	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Hancock	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Harrison	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Hendricks	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Henry	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Howard	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Huntington	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Jackson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Jasper	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
Jay	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Jefferson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WTTV	4	Indianapolis.
Jennings	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
INDIANA—continued			
Johnson	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Knox	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
Kosciusko	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Lagrange	WNDU	16	Do.
	WSBT	22	Do.
	WSJV	28	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Lake	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
La Porte	WBBM	2	Do.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
Lawrence	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WAVE	3	Louisville
	WHAS	11	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Madison	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Marion	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Marshall	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WGN	9	Chicago.
Martin	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTVW	7	Evansville.
	WTTV	4	Indianapolis.
	WAVE	3	Louisville.
Miami	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WGN	9	Chicago.
	WFLD	32	Do.
	WPTA	21	Fort Wayne.
	WKJG	33	Do.
	WNDU	16	South Bend-Elkart.
	WSBT	22	Do.
Monroe	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Montgomery	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Morgan	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Newton	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
	WLFI	18	Lafayette, Ind.
Noble	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Ohio	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Orange	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTTV	4	Indianapolis.
Owen	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Parke	WTWO	2	Do.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
Perry	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Pike	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WTTV	4	Indianapolis.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Porter	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WFLD	32	Do.
Posey	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Pulaski	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
Putnam	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WTWO	2	Terre Haute.
	WTHI	10	Do.
Randolph	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
Ripley	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WTTV	4	Indianapolis.
Rush	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
INDIANA—continued			
St. Joseph	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WGN	9	Chicago.
Scott	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTTV	4	Indianapolis.
Shelby	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Spencer	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Starke	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
Steuben	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
	WKZO	3	Grand Rapids-Kalamazoo.
Sullivan	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
Switzerland	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Tippecanoe	WLFI	18	Lafayette, Ind.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Tipton	WTTV	4	Do.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Union	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WHIO	7	Dayton.
	WKTR	16	Do.
	WTTV	4	Indianapolis.
Vanderburgh	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Vermillion	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
	WCIA	3	Springfield-Decatur-Champaign.
Vigo	WTWO	2	Terre Haute.
	WTHI	10	Do.
	WTTV	4	Indianapolis.
Wabash	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Warren	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WLWI	13	Do.
	WCIA	3	Springfield-Decatur-Champaign.
	WICD	15	Do.
	WTHI	10	Terre Haute.
Warrick	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Washington	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTTV	4	Indianapolis.
Wayne	WLWD	2	Dayton.
	WHIO	7	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
Wells	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
White	WTTV	4	Indianapolis.
	WFBM	6	Do.
	WISH	8	Do.
	WLWI	13	Do.
	WGN	9	Chicago.
	WLFI	18	Lafayette, Ind.
Whitley	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
IOWA			
Adair	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Adams	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Allamakee	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WKBT	8	La Crosse-Eau Claire.
	KROC	10	Rochester-Mason City-Austin.
Appanoose	KTVO	3	Ottumwa-Kirksville.
	KRNT	8	Des Moines.
	WHO	13	Do.
Audubon	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Benton	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Black Hawk	WMT	2	Do.
	KWWL	7	Do.
	KCRG	9	Do.
Boone	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Bremer	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Buchanan	WMT	2	Do.
	KWWL	7	Do.
	KCRG	9	Do.
Buena Vista	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Butler	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	KGLO	3	Rochester-Mason City-Austin.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	IOWA—continued		
Calhoun	WOI	5	Des Moines.
	KRNT	8	Do.
	KVFD	21	Fort Dodge.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Carroll	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
	WOW	6	Omaha.
Cass	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
Cedar	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Cerro Gordo	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Cherokee	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Chickasaw	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	KGLO	3	Rochester-Mason City-Austin.
	KROC	10	Do.
Clarke	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Clay	KTIV	4	Sioux City.
	KCAU	9	Do.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Clayton	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Clinton	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Crawford	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Dallas	WOI		Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Davis	KTVO	3	Ottumwa-Kirksville.
	KRNT	8	Des Moines.
	WHO	13	Do.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Decatur	KRNT	8	Des Moines.
	WHO	3	Do.
	KTVO	3	Ottumwa-Kirksville.
Delaware	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Des Moines	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Dickinson	KTIV	4	Sioux City.
	KCAU	9	Do.
	KEYC	12	Mankato.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Dubuque	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	KDUB	40	Dubuque, Ia.
Emmet	KEYC	12	Mankato.
	KAUS	6	Rochester-Mason City-Austin.
	KCAU	9	Sioux City.
Fayette	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Floyd	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Franklin	KGLO	3	Rochester-Mason City-Austin.
	KROC	10	Do.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WOI	5	Des Moines.
Fremont	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Greene	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Grundy	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Guthrie	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Hamilton	WOI	5	Do.
	KRNT	8	Do.
	WHO	13	Do.
Hancock	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Hardin	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Harrison	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Henry	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	KTVO	3	Ottumwa-Kirksville.
Howard	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	KWWL	7	Cedar Rapids-Waterloo.
	KCRG	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
IOWA—continued			
Humboldt	WOI	5	Des Moines.
	KRNT	8	Do.
	KVFD	21	Ft. Dodge.
Ida	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Iowa	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Jackson	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Jasper	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Jefferson	KTVO	3	Ottumwa-Kirksville.
	WMT	2	Cedar Rapids-Waterloo.
	KCRG	9	Do.
	WOC	6	Davenport-Rock Island (Quad City).
	KHQA	7	Quincy-Hannibal.
Johnson	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
Jones	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Keokuk	WMT	2	Do.
	KWWL	7	Do.
	KCRG	9	Do.
	WHO	13	Des Moines.
	KTVO	3	Ottumwa-Kirksville.
Kossuth	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KVFD	21	Ft. Dodge.
	KEYC	12	Mankato.
Lee	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Linn	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Louisa	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Lucas	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Lyon	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Madison	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Mahaska	KRNT	8	Do.
	WHO	13	Do.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	KTVO	3	Ottumwa-Kirksville.
Marion	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Marshall	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Mills	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Mitchell	KGLO	3	Rochester-Mason City Austin.
	KAUS	6	Do.
	KROC	10	Do.
Monona	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Monroe	KRNT	8	Des Moines.
	WHO	13	Do.
	KTVO	3	Ottumwa-Kirksville.
Montgomery	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Muscatine	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
O'Brien	KTIV	4	Sioux City.
	KCAU	9	Do.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Osceola	KELO	11	Do.
	KSOO	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Page	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Palo Alto	KTIV	4	Sioux City.
	KCAU	9	Do.
	KVFD	21	Ft. Dodge.
	KEYC	12	Mankato.
Plymouth	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO	11	Sioux Falls-Mitchell.
Pocahontas	KTIV	4	Sioux City.
	KCAU	9	Do.
	KRNT	8	Des Moines.
	KVFD	21	Ft. Dodge.
Polk	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Pottawattamie	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Poweshiek	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Ringgold	WOI	5	Do.
	KRNT	8	Do.
	WHO	13	Do.
	WOW	6	Omaha.
	KQTV	2	St. Joseph.
Sac	KTIV	4	Sioux City.
	KCAU	9	Do.
	WOW	6	Omaha.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	IOWA—continued		
Scott	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
	WQAD	8	Do.
Shelby	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Sioux	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Story	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Tama	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WHO	13	Des Moines.
Taylor	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Union	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
	KETV	7	Omaha.
Van Buren	KTVO	3	Ottumwa-Kirksville.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Wapello	KRNT	8	Des Moines.
	WHO	13	Do.
	KTVO	3	Ottumwa-Kirksville.
Warren	WOI	5	Des Moines.
	KRNT	8	Do.
	WHO	13	Do.
Washington	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WHBF	4	Davenport-Rock Island (Quad City).
	WOC	6	Do.
Wayne	KRNT	8	Des Moines.
	WHO	13	Do.
	KTVO	3	Ottumwa-Kirksville.
Webster	WOI	5	Des Moines.
	KRNT	8	Do.
	KVFD	21	Fort Dodge.
Winnebago	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	KEYC	12	Mankato.
Winneshiek	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WKBT	8	La Crosse-Eau Claire.
	KGLO	3	Rochester-Mason City-Austin.
	KROC	10	Do.
Woodbury	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Worth	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Wright	WOI	5	Des Moines.
	KRNT	8	Do.
	KVFD	21	Fort Dodge.
	KGLO	3	Rochester-Mason City-Austin.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	KANSAS		
Allen	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Anderson	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	WIBW	13	Topeka.
Atchison	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
	KTSB	27	Topeka.
Barber	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
	KTEN	10	Ardmore-Ada.
Barton	KCKT	2	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Bourbon	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KCMO	5	Kansas City.
Brown	WDAF	4	Do.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
	WIBW	13	Topeka.
Butler	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Chase	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
	WIBW	13	Topeka.
Chautauqua	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Cherokee	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Cheyenne	KAYS	7	Wichita-Hutchinson.
	KOMC	8	Do.
	KHOL	13	Lincoln-Hastings-Kearney.
Clark	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Clay	WIBW	13	Topeka.
	KHTL	4	Lincoln-Hastings-Kearney.
Cloud	KHTL	4	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	WIBW	13	Topeka.
	KTVH	12	Wichita-Hutchinson.
Coffey	WIBW	13	Topeka.
	KOAM	7	Joplin-Pittsburg.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Comanche	KTVC	6	Wichita-Hutchinson.
	KUPK	13	Do.
Cowley	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Crawford	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Decatur	KOMC	8	Wichita-Hutchinson.
	KHOL	13	Lincoln-Hastings-Kearney.
Dickinson	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
	WIBW	13	Topeka.
Doniphan	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	KANSAS—continued		
Douglas	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	WIBW	13	Topeka.
Edwards	KCKT	2	Wichita-Hutchinson.
	KTVC	6	Do.
	KAYS	7	Do.
	KTVH	12	Do.
Elk	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KOAM	7	Joplin-Pittsburg.
	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
Ellis	KCKT	2	Do.
	KAYS	7	Do.
Ellsworth	KCKT	2	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Finney	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Ford	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Franklin	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	WIBW	13	Topeka.
Geary	WIBW	13	Do.
	KAKE	10	Wichita-Hutchinson.
Gove	KAYS	7	Do.
	KOMC	8	Do.
Graham	KAYS	7	Do.
	KOMC	8	Do.
Grant	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Gray	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Greeley	KAYS	7	Do.
	KGLD	11	Do.
Greenwood	KARD	3	Do.
	KAKE	10	Do.
	WIBW	13	Topeka.
Hamilton	KGLD	11	Wichita-Hutchinson.
	KUPK	13	Do.
Harper	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Harvey	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Haskell	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Hodgeman	KCKT	2	Do.
	KTVC	6	Do.
	KAYS	7	Do.
	KUPK	13	Do.
Jackson	WIBW	13	Topeka.
	KTSB	27	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
Jefferson	WIBW	13	Topeka.
	KTSB	27	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
Jewell	KHTL	4	Lincoln-Hastings Kearney.
	KHAS	5	Do.
	KOLN	10	Do.
Johnson	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.
	KBMA	41	Do.
Kearny	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Kingman	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Kiowa	KCKT	2	Do.
	KTVC	6	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Labette	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Lane	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Leavenworth	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.
Lincoln	KCKT	2	Wichita-Hutchinson.
	KAYS	7	Do.
	KTVH	12	Do.
Linn	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KOAM	7	Joplin-Pittsburg.
Logan	KAYS	7	Wichita-Hutchinson.
	KOMC	8	Do.
Lyon	WIBW	13	Topeka.
	KTSB	27	Do.
McPherson	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Marion	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Marshall	WIBW	13	Topeka.
	KHTL	4	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
Meade	KTVC	6	Witchita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Miami	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
Mitchell	KCKT	2	Witchita-Hutchinson.
	KAYS	7	Do.
	KHTL	4	Lincoln-Hastings-Kearney.
Montgomery	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Morris	WIBW	13	Topeka.
	KTSB	27	Do.
	KARD	3	Witchita-Hutchinson.
	KAKE	10	Do.
Morton	KGLD	11	Do.
	KUPK	13	Do.
Nemaha	WIBW	13	Topeka.
	WDAF	4	Kansas City.
	KQTV	2	St. Joseph.
Neosho	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Ness	KCKT	2	Witchita-Hutchinson.
	KAYS	7	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

KANSAS—continued

County	*Call letters, channel number, and market name*		
Norton	KAYS	7	Witchita-Hutchinson.
	KOMC	8	Do.
	KOLN	10	Lincoln-Hastings-Kearney.
	KHOL	13	Do.
Osage	WIBW	13	Topeka.
	KTSB	27	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Osborne	KCKT	2	Witchita-Hutchinson.
	KAYS	7	Do.
	KHTL	4	Lincoln-Hastings-Kearney.
Ottawa	KCKT	2	Witchita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
	KHTL	4	Lincoln-Hastings-Kearney.
Pawnee	KCKT	2	Witchita-Hutchinson.
	KAYS	7	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Phillips	KOLN	10	Lincoln-Hastings-Kearney.
	KHOL	13	Do.
	KHAS	5	Do.
	KAYS	7	Wichita-Hutchinson.
Pottawatomie	WIBW	13	Topeka.
	KTSB	27	Do.
Pratt	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Rawlins	KAYS	7	Wichita-Hutchinson.
	KOMC	8	Do.
	KHOL	13	Lincoln-Hastings-Kearney.
Reno	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Republic	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN	10	Do.
Rice	KCKT	2	Wichita-Hutchinson.
	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Riley	WIBW	13	Topeka.
	KTSB	27	Do.
Rooks	KCKT	2	Wichita-Hutchinson.
	KAYS	7	Do.
	KHTL	4	Lincoln-Hastings-Kearney.
Rush	KCKT	2	Wichita-Hutchinson.
	KAYS	7	Do.
Russell	KCKT	2	Do.
	KAYS	7	Do.
Saline	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Scott	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Sedgwick	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Seward	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Shawnee	WIBW	13	Topeka.
	KTSB	27	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Sheridan	KAYS	7	Wichita-Hutchinson.
	KOMC	8	Do.
Sherman	KAYS	7	Wichita-Hutchinson.
	KOMC	8	Do.
Smith	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Stafford	KCKT	2	Wichita-Hutchinson.
	KAKE	10	Do.
	KTVH	12	Do.
Stanton	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Stevens	KTVC	6	Do.
	KGLD	11	Do.
	KUPK	13	Do.
Summer	KARD	3	Do.
	KAKE	10	Do.
	KTVH	12	Do.
Thomas	KAYS	7	Do.
	KOMC	8	Do.
Trego	KCKT	2	Do.
	KAYS	7	Do.
Wabaunsee	WIBW	13	Topeka.
	KTSB	27	Do.
	KCMO	5	Kansas City.
	KMBC	9	Do.
Wallace	KAYS	7	Wichita-Hutchinson.
Washington	KHTL	4	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	WIBW	13	Topeka.
Wichita	KAYS	7	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.
Wilson	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KOTV	6	Tulsa.
Woodson	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	WIBW	13	Topeka.
Wyandotte	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.

KENTUCKY

County	*Call letters, channel number, and market name*		
Adair	WAVE	3	Louisville.
	WHAS	11	Do.
	WLAC	5	Nashville.
Allen	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Anderson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Ballard	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Barren	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Bath	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
KENTUCKY—continued			
Bell	WATE	6	Knoxville.
	WBIR	10	Do.
Boone	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Bourbon	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Boyd	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Boyle	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Bracken	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Breathitt	WSAZ	3	Charleston-Huntington.
	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Breckinridge	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WTVW	7	Evansville.
Bullitt	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Butler	WSM	4	Nashville.
	WLAC	5	Do.
	WBKO	13	Bowling Green.
	WTVW	7	Evansville.
Caldwell	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
Calloway	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Campbell	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Carlisle	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Carroll	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WTTV	4	Indianapolis.
	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Carter	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Casey	WLEX	18	Lexington.
	WKYT	27	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Christian	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Clark	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Clay	WATE	6	Knoxville.
	WBIR	10	Do.
Clinton	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Crittenden	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
	WTVW	7	Evansville.
Cumberland	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Daviess	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Edmonson	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WBKO	13	Bowling Green.
Elliott	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Estill	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Fayette	WLEX	18	Do.
	WKYT	27	Do.
	WBLG	62	Do.
Fleming	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WLEX	18	Lexington.
Floyd	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Franklin	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WCPO	9	Cincinnati.
	WKRC	12	Do.
	WXIX	19	Do.
	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Fulton	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Gallatin	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Garrard	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WAVE	3	Louisville.
Grant	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Graves	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Grayson	WAVE	3	Louisville.
	WHAS	11	Do.
	WBKO	13	Bowling Green.
	WTVW	7	Evansville.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	KENTUCKY—continued		
Green	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Greenup	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Hancock	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Hardin	WAVE	3	Do.
	WHAS	11	Do.
	WLKY	32	Do.
Harlan	WATE	6	Knoxville.
	WBIR	10	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
Harrison	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WLEX	18	Lexington.
Hart	WSM	4	Nashville.
	WLAC	5	Do.
	WBKO	13	Bowling Green.
	WAVE	3	Louisville.
	WHAS	11	Do.
Henderson	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Henry	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Hickman	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Hopkins	WTVW	7	Evansville.
	WEHT	25	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
Jackson	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WATE	6	Knoxville.
	WBIR	10	Do.
Jefferson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Jessamine	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Johnson	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Kenton	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Knott	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WSAZ	3	Charleston-Huntington.
	WLOS	13	Greenville-Spartanburg-Asheville.
	WLEX	18	Lexington.
Knox	WATE	6	Knoxville.
	WBIR	10	Do.
Larue	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	KENTUCKY—continued		
Laurel	WATE	6	Knoxville.
	WBIR	10	Do.
Lawrence	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Lee	WLEX	18	Lexington.
	WKYT	27	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
Leslie	WCYB	5	Do.
	WJHL	11	Do.
	WBIR	10	Knoxville.
Letcher	WHTN	13	Charleston-Huntington
	WCYB	5	Bristol-Kingsport-Johnson City.
Lewis	WSAZ	3	Charleston-Huntington.
	WHTN	13	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Lincoln	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Livingston	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Logan	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Lyon	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
McCracken	WSIL	3	Do.
	WPSD	6	Do.
	KFVS	12	Do.
McCreary	WATE	6	Knoxville.
	WBIR	10	Do.
McLean	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WLAC	5	Nashville.
Madison	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Magoffin	WSAZ	3	Charleston-Huntington.
Marion	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do
Marshall	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Martin	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Mason	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Meade	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Menifee	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Mercer	WLEX	18	Do.
	WKYT	27	Do.
	WBLG	62	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
Metcalfe	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	KENTUCKY—continued		
Monroe	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Montgomery	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WXIX	19	Cincinnati.
Morgan	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Muhlenberg	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WBKO	13	Bowling Green.
	WTVW	7	Evansville.
	WEHT	25	Do.
Nelson	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Nicholas	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Ohio	WTVW	7	Evansville.
	WEHT	25	Do.
	WBKO	13	Bowling Green.
	WSM	4	Nashville.
	WLAC	5	Do.
Oldham	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Owen	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WAVE	3	Louisville
	WHAS	11	Do.
Owsley	WLEX	18	Lexington.
	WKYT	27	Do.
	WATE	6	Knoxville.
Pendleton	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Perry	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Pike	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Powell	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Pulaski	WATE	6	Knoxville.
	WBIR	10	Do.
	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
Robertson	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WLEX	18	Lexington.
Rockcastle	WLEX	18	Do.
	WKYT	27	Do.
	WBLG	62	Do.
Rowan	WSAZ	3	Charleston-Huntington.
Russell	WATE	6	Knoxville.
	WBIR	10	Do.
	WHAS	11	Louisville.
	WSM	4	Nashville.
	WLAC	5	Nashville.
	WSIX	8	Do.
Scott	WLEX	18	Lexington.
	WKYT	27	Do.
	WBLG	62	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Shelby	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Simpson	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Spencer	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Taylor	WAVE	3	Do.
	WHAS	11	Do.
Todd	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Trigg	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
Trimble	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WTTV	4	Indianapolis.
Union	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
Warren	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WBKO	13	Bowling Green.
Washington	WAVE	3	Louisville.
	WHAS	11	Do.
	WLKY	32	Do.
Wayne	WATE	6	Knoxville.
	WBIR	10	Do.
Webster	WTVW	7	Evansville.
	WFIE	14	Do.
	WEHT	25	Do.
Whitley	WATE	6	Knoxville.
	WBIR	10	Do.
Wolfe	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WLEX	18	Lexington.
	WKYT	27	Do.
Woodford	WLEX	18	Do.
	WKYT	27	Do.
	WBLG	62	Do.
	WAVE	3	Louisville.
	WHAS	11	Do.
	LOUISIANA		
Acadia	KATC	3	Layfayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
	KALB	5	Alexandria, La.
Allen	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KALB	5	Alexandria, La.
	KPLC	7	Lake Charles.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	LOUISIANA—continued		
Ascension	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Assumption	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Avoyelles	KALB	5	Alexandria, La.
	WAFB	9	Baton Rouge.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
Beauregard	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KALB	5	Alexandria, La.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KPLC	7	Lake Charles.
Bienville	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Bossier	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Caddo	KTBS	3	Do.
	KTAL	6	Do.
	KSLA	12	Do.
Calcasieu	KPLC	7	Lake Charles.
	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
Caldwell	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Cameron	KPLC	7	Lake Charles.
	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
Catahoula	KNOE	8	Monroe-El Dorado.
	KALB	5	Alexandria, La.
Claiborne	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Concordia	KNOE	8	Do.
	KALB	5	Alexandria, La.
DeSoto	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
East Baton Rouge.	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
East Carroll	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
East Feliciana	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Evangeline	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KALB	5	Alexandria, La.
Franklin	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Grant	KALB	5	Alexandria, La.
	KNOE	8	Monroe-El Dorado.
Iberia	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Iberville	WBRZ	2	Do.
	WAFB	9	Do.
Jackson	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
Jefferson	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Jefferson Davis	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KPLC	7	Lake Charles.
Lafayette	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Lafourche	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WAFB	9	Baton Rouge.
LaSalle	KNOE	8	Monroe-El Dorado.
	KALB	5	Alexandria, La.
Lincoln	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Livingston	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	WWL	4	New Orleans.
Madison	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KNOE	8	Monroe-El Dorado.
Morehouse	KNOE	8	Do.
	KTVE	10	Do.
Natchitoches	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
	KALB	5	Alexandria, La.
	KNOE	8	Monroe-El Dorado.
Orleans	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WWOM	26	Do.
Ouachita	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Plaquemines	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Pointe Coupee	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Rapides	KALB	5	Alexandria, La.
	KLFY	10	Lafayette, La.
	KNOE	8	Monroe-El Dorado.
Red River	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Richland	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
	WLBT	3	Jackson, Miss.
Sabine	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KABL	5	Alexandria, La.
St. Bernard	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
LOUISIANA—continued			
St. Charles	WWL	4	New Orleans
	WDSU	6	Do.
	WVUE	8	Do.
St. Helena	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
St. James	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
St. John the Baptist	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WAFB	9	Baton Rouge.
St. Landry	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KALB	5	Alexandria, La.
	WBRZ	2	Boton Rouge.
	WAFB	9	Do.
St. Martin	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
St. Mary	WBRZ	2	Do.
	WAFB	9	Do.
	KATC	3	Lafayette, La.
	KLFY	10	Do.
St. Tammany	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Tangipahoa	WWL	4	Do.
	WDSU	6	Do.
	WVUE	8	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Tensas	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KNOE	8	Monroe-El Dorado.
Terrebonne	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Union	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
Vermilion	KATC	3	Lafayette, La.
	KLFY	10	Do.
	KLNI	15	Do.
	KALB	5	Alexandria, La.
Vernon	KALB	5	Do.
	KTBS	3	Shreveport-Texarkana.
Washington	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WLOX	13	Baton Rouge.
Webster	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
West Baton Rouge	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
West Carroll	KNOE	8	Monroe-El Dorado.
	KTVE	10	Do.
West Feliciana	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	KATC	3	Lafayette, La.
Winn	KNOE	8	Monroe-El Dorado.
	KALB	5	Alexandria, La.
MAINE			
Androscoggin	WCSH	6	Portland-Poland Springs.
	WMTW	8	Do.
	WGAN	13	Do.
Aroostook	WAGM	8	Presque Isle.
	CHSJ	4	Canada.
Cumberland	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Franklin	WCSH	6	Do.
	WMTW	8	Do.
	WGAN	13	Do.
	WABI	5	Bangor.
Hancock	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
Kennebec	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
	WLBZ	2	Bangor.
	WABI	5	Do.
Knox	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Lincoln	WCSH	6	Do.
	WMTW	8	Do.
	WGAN	13	Do.
Oxford	WCSH	6	Do.
	WMTW	8	Do.
	WGAN	13	Do.
	WABI	5	Bangor.
Penobscot	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
Piscataquis	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
Sagadahoc	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Somerset	WLBZ	2	Bangor.
	WABI	5	Do.
	WEMT	7	Do.
	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Waldo	WLBZ	2	Bangor.
	WABI	5	Do.
	WEMT	7	Do.
Washington	WLBZ	2	Do.
	WABI	5	Do.
	WEMT	7	Do.
	CHSJ	4	Canada.
	CKLT	9	Do.
York	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MARYLAND			
Allegany	WTTG	5	Washington, D.C.
	WMAL	7	Do.
	WTOP	9	Do.
	WJAC	6	Johnstown-Altoona.
Anne Arundel	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Baltimore (including Baltimore City).	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
Calvert	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
Caroline	WMAR	2	Do.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
Carroll	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Cecil	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
Charles	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Dorchester	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WBOC	16	Salisbury.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Frederick	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
Garrett	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WJAC	6	Johnstown-Altoona.
Harford	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
MARYLAND—continued			
Howard	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Kent	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WTOP	9	Do.
Montgomery	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Prince Georges	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Queen Annes	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
St. Marys	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
Somerset	WBOC	16	Salisbury.
	WTTG	5	Washington, D.C.
Talbot	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Washington	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WHAG	25	Hagerstown, Md.
Wicomico	WBOC	16	Salisbury.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
Worcester	WBOC	16	Salisbury.
	WTTG	5	Washington, D.C.
MASSACHUSETTS			
Barnstable	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WKBG	56	Do.
	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
Berkshire	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.
	WTIC	3	Hartford-New Haven.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	MASSACHUSETTS—continued		
Bristol	WTFV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Dukes	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
Essex	WBZ	4	Do.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Franklin	WWLP	22	Springfield, Mass.
	WHYN	40	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WTIC	3	Hartford-New Haven.
Hampden	WWLP	22	Springfield, Mass.
	WHYN	40	Do.
	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
	WHCT	18	Do.
	WHNB	30	Do.
Hampshire	WWLP	22	Springfield, Mass.
	WHYN	40	Do.
	WTIC	3	Hartford-New Haven.
Middlesex	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Nantucket	WTFV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
Norfolk	WBZ	4	Do.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Plymouth	WBZ	4	Do.
	WHDH	5	Do.
	WSBK	38	Do.
	WKBG	56	Do.
	WNAC	7	Do.
	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
Suffolk	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Worcester	WBZ	4	Do.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
	WJAR	10	Providence.
	WPRI	12	Do.
	WSMW	27	Worcester.
	MICHIGAN		
Alcona	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
Alger	WLUC	6	Marquette.
	WFRV	5	Green Bay.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	MICHIGAN—continued		
Allegan	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Alpena	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Antrim	WPBN	7	Do.
	WWTV	9	Do.
Arenac	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WWTV	9	Traverse City-Cadillac.
Baraga	WLUC	6	Marquette.
	WFRV	5	Green Bay.
	WLUK	11	Do.
Barry	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
	WJIM	6	Lansing.
Bay	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WKNX	25	Do.
Benzie	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Berrien	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Branch	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WJIM	6	Lansing.
	WILX	10	Do.
Calhoun	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WJIM	6	Lansing.
	WILX	10	Do.
Cass	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
	WGN	9	Chicago.
	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
Charlevoix	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Cheboygan	WPBN	7	Do.
	WWTV	9	Do.
Chippewa	WPBN	7	Do.
	WWTV	9	Do.
	CJIC	2	Canada.
Clare	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Clinton	WJIM	6	Lansing.
	WILX	10	Do.
	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WOOD	8	Grand Rapids-Kalamazoo.
Crawford	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
MICHIGAN—continued			
Delta	WFRV	5	Green Bay.
	WLUK	11	Do.
	WLUC	6	Marquette.
Dickinson	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
	WLUC	6	Marquette.
Eaton	WJIM	6	Lansing.
	WILX	10	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
Emmet	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Genesee	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	WKBD	50	Do.
	WJIM	6	Lansing.
Gladwin	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WWTV	9	Traverse City-Cadillac.
Gogebic	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
	WAEO	12	Wausau-Rhinelander.
Grand Traverse	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Gratiot	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WOOD	8	Grand Rapids-Kalamazoo.
	WJIM	6	Lansing.
Hillsdale	WJIM	6	Do.
	WILX	10	Do.
	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
Houghton	WLUC	6	Marquette.
	WFRV	5	Green Bay.
Huron	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	CKNX	8	Canada.
Ingham	WJIM	8	Lansing.
	WILX	10	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
Ionia	WKZO	3	Do.
	WOOD	8	Do.
	WZZM	13	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WJIM	6	Lansing.
Iosco	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
Iron	WLUC	6	Marquette.
	WFRV	5	Green Bay.
	WAEO	12	Wausau-Rhinelander.
Isabella	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WJIM	6	Lansing.
	WWTV	9	Traverse City-Cadillac.
Jackson	WJIM	6	Lansing.
	WILX	10	Do.
	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
Kalamazoo	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Kalkaska	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Kent	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Keweenaw	WLUC	6	Marquette.
	CKPR	2	Canapa.
Lake	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
	WZZM	13	Grand Rapids-Kalamazoo.
Lapeer	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WJIM	6	Lansing.
Leelanau	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Lenawee	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
	WJIM	6	Lansing.
	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Livingston	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WJIM	6	Lansing.
Luce	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
	WFRV	5	Green Bay.
	WLUC	6	Marquette.
	CJIC	2	Canada.
Mackinac	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
	WFRV	5	Green Bay.
	CJIC	2	Canada.
Macomb	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MICHIGAN—continued			
Manistee	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
	WZZM	13	Grand Rapids-Kalamazoo.
	WBAY	2	Green Bay.
	WLUK	11	Do.
Marquette	WLUC	6	Marquette.
	WFRV	5	Green Bay.
	WLUK	11	Do.
Mason	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
	WZZM	13	Grand Rapids-Kalamazoo.
	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Mecosta	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
	WZZM	13	Grand Rapids-Kalamazoo.
Menominee	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
	WLUC	6	Marquette.
Midland	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WWTV	9	Traverse City-Cadillac.
Missaukee	WPBN	7	Do.
	WWTV	9	Do.
Monroe	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
	WTOL	11	Toledo.
	WDHO	24	Do.
	WSPD	13	Do.
Montcalm	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
	WJRT	12	Flint-Saginaw-Bay City.
	WJIM	6	Lansing.
	WWTV	9	Traverse City-Cadillac.
Montmorency	WPBN	7	Do.
	WWTV	9	Do.
Muskegon	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Newaygo	WKZO	3	Do.
	WOOD	8	Do.
	WZZM	13	Do.
	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Oakland	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
Oceana	WKZO	3	Grand Rapids-Kalamazoo.
	WZZM	13	Do.
	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Ogemaw	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WWTV	9	Traverse City-Cadillac.
Ontonagon	WLUC	6	Marquette.
	KDAL	3	Duluth-Superior.
	WAEO	12	Wausau-Rhinelander.
Osceola	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
	WNEM	5	Flint-Saginaw-Bay City.
	WZZM	13	Grand Rapids-Kalamazoo.
Oscoda	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
	WNEM	5	Flint-Saginaw-Bay City.
Otsego	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Ottawa	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Presque Isle	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.
Poscommon	WPBN	7	Do.
	WWTV	9	Do.
	WNEM	5	Flint-Saginaw-Bay City.
Saginaw	WNEM	5	Do.
	WJRT	12	Do.
	WKNX	25	Do.
St. Clair	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
St. Joseph	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WNDU	16	South Bend-Elkhart.
	WSBT	22	Do.
	WSJV	28	Do.
Sanilac	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	CFPL	10	Canada.
Schoolcraft	WLUC	6	Marquette.
	WFRV	1	Green Bay.
Shiawassee	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WJIM	6	Lansing.
	WILX	10	Do.
Tuscola	WNEM	5	Flint-Saginaw-Bay City.
	WJRT	12	Do.
	WKNX	25	Do.
Van Buren	WKZO	3	Grand Rapids-Kalamazoo.
	WOOD	8	Do.
	WZZM	13	Do.
Washtenaw	WJBK	2	Detroit.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
Wayne	WJBK	2	Do.
	WWJ	4	Do.
	WXYZ	7	Do.
	CKLW	9	Do.
	WKBD	50	Do.
Wexford	WPBN	7	Traverse City-Cadillac.
	WWTV	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MINNESOTA			
Aitkin	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
	KNMT	12	Alexandria, Minn.
Anoka	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Becker	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Beltrami	KNMT	12	Alexandria, Minn.
	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	KTHI	11	Fargo.
Benton	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
Big Stone	KCMT	7	Do.
	WTCN	11	Minneapolis-St. Paul.
	KELO	11	Sioux Falls-Mitchell.
Blue Earth	KEYC	12	Mankato.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KAUS	6	Rochester-Mason City-Austin.
Brown	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.
	KAUS	6	Rochester-Mason City-Austin.
Carlton	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
Carver	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Cass	KCMT	7	Alexandria, Minn.
	KNMT	12	Do.
	KDAL	3	Duluth-Superior.
	WDIO	10	Do.
Chippewa	KCMT	7	Alexandria, Minn.
	WCCO	4	Minneapolis-St. Paul.
	KMSP	9	Do.
	WTCN	11	Do.
Chisago	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Clay	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Clearwater	KXJB	4	Do.
	WDAY	6	Do.
	KTHI	11	Do.
Cook	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
	CKPR	2	Canada.
Cottonwood	KEYC	12	Mankato.
	KSTP	5	Minneapolis-St. Paul.
	WTCN	11	Do.
	KAUS	6	Rochester-Mason City-Austin.
Crow Wing	KCMT	7	Alexandria, Minn.
	KNMT	12	Do.
	KDAL	3	Duluth-Superior.
Dakota	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
MINNESOTA—continued			
Dodge	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
Douglas	KCMT	7	Alexandria, Minn.
Faribault	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	KEYC	12	Mankato.
Fillmore	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	WKBT	8	La Crosse-Eau Claire.
Freeborn	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Goodhue	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Grant	KCMT	7	Alexandria, Minn.
	KXJB	4	Fargo.
Hennepin	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Houston	WKBT	8	La Crosse-Eau Claire.
	KROC	10	Rochester-Mason City-Austin.
Hubbard	KNMT	12	Alexandria, Minn.
Isanti	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Itasca	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
	KNMT	12	Alexandria, Minn.
Jackson	KEYC	12	Mankato.
	KCAU	9	Sioux City.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Kanabec	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Kandiyohi	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
Kittson	KXJB	4	Fargo.
	WDAZ	8	Do.
	KCND	12	Pembina.
	CBWT	6	Canada.
	CJAY	7	Do.
Koochiching	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
	CBWT	6	Canada.
Lac Qui Parle	KCMT	7	Alexandria, Minn.
	KELO	11	Sioux Falls-Mitchell.
Lake	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
Lake of the Woods.	CBWT	6	Canada.
Le Sueur	WCCO	4	Minneapolis-St Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MINNESOTA—continued			
Lincoln	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
Lyon	KELO	11	Do.
	KSOO	13	Do.
	KEYC	12	Mankato.
McLeod	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Mahnomen	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Marshall	KXJB	4	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
	KCND	12	Pembina.
	CBWT	6	Canada.
Martin	KEYC	12	Mankato.
	KAUS	6	Rochester-Mason City-Austin.
	KROC	10	Do.
Meeker	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
Mille Lacs	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Morrison	KCMT	7	Alexandria, Minn.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Mower	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Murray	KELO	11	Sioux Falls-Mitchell.
	KSOO	31	Do.
Nicollet	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.
Nobles	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
	KCAU	9	Sioux City.
Norman	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Olmsted	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Otter Tail	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
	KCMT	7	Alexandria, Minn.
Pennington	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
Pine	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Pipestone	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
Polk	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Pope	KCMT	7	Alexandria, Minn.
Ramsey	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Red Lake	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
Redwood	KEYC	12	Mankato.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Penville	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
	KEYC	12	Mankato.
Rice	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Rock	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
	KCAU	9	Sioux City.
Roseau	KCND	12	Pembina.
	WDAZ	8	Fargo.
	CBWT	6	Canada.
	CJAY	7	Do.
St. Louis	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
Scott	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Sherburne	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Sibley	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.
Stearns	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
Steele	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
	KEYC	12	Mankato.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Stevens	KCMT	7	Alexandria, Minn.
	KELO	11	Sioux Falls-Mitchell.
Swift	KCMT	7	Alexandria, Minn.
Todd	KCMT	7	Do.
Traverse	KCMT	7	Do.
	KXJB	4	Fargo.
	KELO	11	Sioux Falls-Mitchell.
Wabasha	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	KAUS	6	Rochester-Mason City-Austin.
	KROC	10	Do.
Wadena	KCMT	7	Alexandria, Minn.
	KNMT	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
MINNESOTA—continued			
Waseca	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KEYC	12	Mankato.
	KGLO	3	Rochester-Mason City-Austin.
	KAUS	6	Do.
	KROC	10	Do.
Washington	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Watonwan	KEYC	12	Mankato.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	WTCN	11	Do.
	KAUS	6	Rochester-Mason City-Austin.
Wilkin	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Winona	WKBT	8	La Crosse-Eau Claire.
	KAUS	6	Rochester-Mason City-Austin.
	KROC	10	Do.
Wright	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Yellow Medicine	WCCO	4	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KCMT	7	Alexandria, Minn.
	KELO	11	Sioux Falls-Mitchell.
MISSISSIPPI			
Adams	KNOE	8	Monroe-El Dorado.
	KALB	5	Alexandria, La.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Alcorn	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Amite	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	WLBT	3	Jackson, Miss.
Attala	WLBT	3	Do.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
Benton	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Bolivar	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WREC	3	Memphis.
	WMC	5	Do.
Calhoun	WREC	3	Do.
	WMC	5	Do.
	WCBI	4	Columbus, Miss.
	WABG	6	Greenwood-Greenville.
Carroll	WABG	6	Do.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Chickasaw	WCBI		Columbus, Miss.
	WMC	5	Memphis.
	WTWV	9	Tupelo.
Choctaw	WCBI	4	Columbus, Miss.
	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
MISSISSIPPI—continued			
Claiborne	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Clarke	WTOK	11	Meridian.
	WDAM	7	Laurel-Hattiesburg.
Clay	WCBI	4	Columbus, Miss.
Coahoma	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Copiah	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Covington	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
De Soto	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Forrest	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Franklin	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WBRZ	2	Baton Rouge.
George	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Greene	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
	WALA	10	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WDAM	7	Laurel-Hattiesburg.
Grenada	WABG	6	Greenwood-Greenville.
	WREC	3	Memphis.
	WMC	5	Do.
Hancock	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Harrison	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WKRG	5	Mobile-Pensacola.
	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
Hinds	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Holmes	WLBT	3	Do.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
Humphreys	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
Issaquena	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
	KNOE	8	Monroe-El Dorado:
Itawamba	WTWV	9	Tupelo.
	WCBI	4	Columbus, Miss,
Jackson	WEAR	3	Mobile-Pensacola:
	WKRG	5	Do.
	WALA	10	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WDSU	6	New Orleans.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MISSISSIPPI—continued			
Jasper	WDAM	7	Laurel-Hattiesburg.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WTOK	11	Meridian.
Jefferson	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KNOE	8	Monroe-El Dorado.
Jefferson Davis	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WDAM	7	Laurel-Hattiesburg.
Jones	WDAM	7	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WTOK	11	Meridian.
Kemper	WTOK	11	Do.
Lafayette	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Lamar	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Lauderdale	WTOK	11	Meridian.
Lawrence	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Leake	WLBT	3	Do.
	WJTV	12	Do.
Lee	WTWV	9	Tupelo.
	WCBI	4	Columbus, Miss.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Leflore	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Lincoln	WLBT	3	Do.
	WJTV	12	Do.
Lowndes	WCBI	4	Columbus, Miss.
Madison	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Marion	WLBT	3	Do.
	WJTV	12	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WDAM	7	Laurel-Hattiesburg.
Marshall	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Monroe	WCBI	4	Columbus, Miss.
	WTWV	9	Tupelo.
Montgomery	WABG	6	Greenwood-Greenville.
	WCBI	4	Columbus, Miss.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WMC	5	Memphis.
Neshoba	WTOK	11	Meridian.
	WLBT	3	Jackson, Miss.
Newton	WTOK	11	Meridian.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Noxubee	WTOK	11	Meridian.
	WCBI	4	Columbus, Miss.
Oktibbeha	WCBI	4	Do.
Panola	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Pearl River	WWL	4	New Orleans.
	WDSU	6	Do.
	WVUE	8	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
Perry	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WKRG	5	Mobile-Pensacola.
Pike	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
	WWL	4	New Orleans.
Pontotoc	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WTWV	9	Tupelo.
Prentiss	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WTWV	9	Tupelo.
Quitman	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Rankin	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Scott	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WTOK	11	Meridian.
Sharkey	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
Simpson	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WAPT	16	Do.
Smith	WLBT	3	Do.
	WJTV	12	Do.
	WDAM	7	Laurel-Hattiesburg.
Stone	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WDAM	7	Laurel-Hattiesburg.
	WKRG	5	Mobile-Pensacola.
	WWL	4	New Orleans.
	WDSU	6	Do.
Sunflower	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
Tallahatchie	WABG	6	Greenwood-Greenville.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Tate	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Tippah	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Tishomingo	WTWV	9	Tupelo.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Tunica	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Union	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Walthall	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WDAM	7	Laurel-Hattiesburg.
	WWL	4	New Orleans.
	WDSU	6	Do.
Warren	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KNOE	8	Monroe-El Dorado.
Washington	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	KTVE	10	Monroe-El Dorado.
	WABG	6	Greenwood-Greenville.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	MISSISSIPPI—continued		
Wayne	WDAM	7	Laurel-Hattiesburg.
	WLOX	13	Biloxi-Gulfport-Pascagoula.
	WTOK	11	Meridian.
	WEAR	3	Mobile-Pensacola.
	WKRG	5	Do.
Webster	WCBI	4	Columbus, Miss.
	WABG	6	Greenwood-Greenville.
	WLBT	3	Jackson, Miss.
Wilkinson	WBRZ	2	Baton Rouge.
	WAFB	9	Do.
Winston	WTOK	11	Meridian.
	WCBI	4	Columbus, Miss.
	WLBT	3	Jackson, Miss.
Yalobusha	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WABG	6	Greenwood-Greenville.
Yazoo	WLBT	3	Jackson, Miss.
	WJTV	12	Do.
	WABG	6	Greenwood-Greenville.
	MISSOURI		
Adair	KTVO	3	Ottumwa-Kirksville.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Andrew	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
Atchison	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KQTV	2	St. Joseph.
Audrain	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Barry	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Barton	KOAM	7	Do.
	KODE	12	Do.
	KUHI	16	Do.
Bates	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Benton	KMOS	6	Columbia-Jefferson City.
	KCMO	5	Kansas City.
	KMBC	9	Do.
	KYTV	3	Springfield, Mo.
Bollinger	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Boone	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Buchanan	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Butler	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Caldwell	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
	MISSOURI—continued		
Callaway	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Camden	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Cape Girardeau	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Carroll	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Carter	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	KAIT	8	Jonesboro.
Cass	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.
Cedar	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Chariton	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Christian	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Clark	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Clay	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.
Clinton	WDAF	4	Do.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.
	KQTV	2	St. Joseph.
Cole	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Cooper	KOMU	8	Do.
	KRCG	13	Do.
Crawford	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KRCG	13	Columbia-Jefferson City.
Dade	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Dallas	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Daviess	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
DeKalb	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
MISSOURI—continued			
Dent	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
	KRCG	13	Columbia-Jefferson City.
	KYTV	3	Springfield, Mo.
Douglas	KYTV	3	Do.
	KTTS	10	Do.
	KMTC	27	Do.
Dunklin	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KAIT	8	Jonesboro.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Franklin	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Gasconade	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KRCG	13	Columbia-Jefferson City.
Gentry	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Greene	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Grundy	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KTVO	3	Ottumwa-Kirksville.
	KQTV	2	St. Joseph.
Harrison	KQTV	2	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
Henry	WDAF	4	Do.
	KMBC	9	Do.
	KCMO	5	Do.
Hickory	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Holt	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Howard	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Howell	KYTV	3	Springfield, Mo.
	KMTC	27	Do.
Iron	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Jackson	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.
Jasper	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Jefferson	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Johnson	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Knox	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Laclede	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Lafayette	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.
Lawrence	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Lewis	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Lincoln	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Linn	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KTVO	3	Ottumwa-Kirksville.
Livingston	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KQTV	2	St. Joseph.
McDonald	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Macon	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KOMU	8	Columbia-Jefferson City.
	KTVO	3	Ottumwa-Kirksville.
Madison	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Maries	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
Marion	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Mercer	KTVO	3	Ottumwa-Kirksville.
	KRNT	8	Des Moines.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KQTV	2	St. Joseph.
Miller	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Mississippi	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Moniteau	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Monroe	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

MISSOURI—continued

County	*Call letters, channel number, and market name*		
Montgomery	KOMU	8	Columbia-Jefferson City
	KRCG	13	
	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Morgan	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KYTV	3	Springfield, Mo.
New Madrid	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Newton	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
Nodaway	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMTV	3	Omaha.
	WOW	6	Do.
Oregon	KYTV	3	Springfield, Mo.
	KAIT	8	Jonesboro.
Osage	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KTVI	2	St. Louis.
Ozark	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
Pemiscot	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Perry	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Pettis	KMOS	6	Columbia-Jefferson City.
	KOMU	8	Do.
	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
Phelps	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KYTV	3	Springfield, Mo.
Pike	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Platte	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KBMA	41	Do.
	KCIT	50	Do.
	KQTV	2	St. Joseph.
Polk	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Pulaski	KYTV	3	Do.
	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Putnam	KTVO	3	Ottumwa-Kirksville.
Ralls	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
	WJJY	14	Jacksonville, Ill.
Randolph	KOMU	8	Columbia-Jefferson City.
	KRCG	13	Do.
Ray	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KCIT	50	Do.
Reynolds	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
Ripley	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	KAIT	8	Jonesboro.
St. Charles	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
St. Clair	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
St. Francois	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
St. Louis including city of St. Louis.	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Ste. Genevieve	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
	KDNL	30	Do.
Saline	WDAF	4	Kansas City.
	KCMO	5	Do.
	KMBC	9	Do.
	KMOS	6	Columbia-Jefferson City
	KOMU	8	Do.
	KRCG	13	Do.
Schuyler	KTVO	3	Ottumwa-Kirksville.
	KHQA	7	Quincy-Hannibal.
	WGEM	10	Do.
Scotland	KHQA	7	Do.
	WGEM	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Scott	WSIL	3	Paducah-Cape Girardeau-Harrisburg.
	WPSD	6	Do.
	KFVS	12	Do.
Shannon	KYTV	3	Springfield, Mo.
Shelby	KHQA	7	Quincy-Hannibal.
	WGEN	10	Do.
	KTVO	3	Ottumwa-Kirksville.
Stoddard	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Stone	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Sullivan	KTVO	3	Ottumwa-Kirksville.
	KCMO	5	Kansas City.
	KMBC	9	Do.
	WGEM	10	Quincy-Hannibal.
Taney	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	MISSOURI—continued		
Texas	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Vernon	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
	KCMO	5	Kansas City.
Warren	KTVI	2	St. Louis.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Washington	KTVI	2	Do.
	KMOX	4	Do.
	KSD	5	Do.
	KPLR	11	Do.
Wayne	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
Webster	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
Worth	KQTV	2	St. Joseph.
	WDAF	4	Kansas City.
	KCMO	5	Do.
Wright	KYTV	3	Springfield, Mo.
	KTTS	10	Do.
	KMTC	27	Do.
	MONTANA		
Beaverhead	KXLF	4	Butte.
	KGVO	13	Missoula.
Big Horn	KOOK	2	Billings.
	KULR	8	Do.
Blaine	KRTV	3	Great Falls.
	KFBB	5	Do.
	CJLH	7	Canada.
Broadwater	KXLF	4	Butte.
	KRTV	3	Great Falls.
	KFBB	5	Do.
Carbon	KOOK	2	Billings.
	KULR	8	Do.
Carter	KOTA	3	Rapid City.
	KXGN	5	Glendive.
Cascade	KRTV	3	Great Falls.
	KFBB	5	Do.
Chouteau	KRTV	3	Do.
	KFBB	5	Do.
Custer	KOOK	2	Billings.
	KULR	8	Do.
	KYUS	3	Miles City, Mont.
Daniels	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.
Dawson	KXGN	5	Glendive.
	KUMV	8	Minot-Bismarck.
Deer Lodge	KXLF	4	Butte.
	KGVO	13	Missoula.
Fallon	KDIX	2	Dickinson, N. Dak.
	KXGN	5	Glendive.
Fergus	KOOK	2	Billings.
	KULR	8	Do.
	KFBB	5	Great Falls.
Flathead	KCFW	9	Missoula.
	KREM	2	Spokane.
	KXLY	4	Do.
Gallatin	KXLF	4	Butte.
	KGVO	13	Missoula.
Garfield	KOOK	2	Billings.
	KULR	8	Do.
Glacier	KRTV	3	Great Falls.
	KFBB	5	Do.
	CJLH	7	Canada.
Golden Valley	KOOK	2	Billings.
	KULR	8	Do.
Granite	KXLF	4	Butte.
	KGVO	13	Missoula.
Hill	KRTV	3	Great Falls.
	KFBB	5	Do.
	CFCN	4	Canada.
	CJLH	7	Do.
Jefferson	KXLF	4	Butte.
	KFBB	5	Great Falls.
	KGVO	13	Missoula.
Judith Basin	KOOK	2	Billings.
	KULR	8	Do.
	KRTV	3	Great Falls.
	KFBB	5	Do.
Lake	KGVO	13	Missoula.
	KXLF	4	Butte.
	KXLY	4	Spokane.
Lewis & Clark	KBLL	12	Helena.
	KXLF	4	Butte.
	KFBB	5	Great Falls.
Liberty	KRTV	3	Do.
	KFBB	5	Do.
	CFCN	4	Canada.
	CJLH	7	Do.
Lincoln	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KCFW	9	Missoula.
McCone	KUMV	8	Minot-Bismarck.
	KXGN	5	Glendive.
Madison	KXLF	4	Butte.
	KGVO	13	Missoula.
Meagher	KRTV	3	Great Falls.
	KFBB	5	Do.
	KXLF	4	Butte.
Mineral	KXLY	4	Spokane.
	KXLF	4	Butte.
	KGVO	13	Missoula.
Missoula	KGVO	13	Do.
	KXLF	4	Butte.
Musselshell	KOOK	2	Billings.
	KULR	8	Do.
Park	KOOK	2	Do.
	KULR	8	Do.
	KXLF	4	Butte.
Petroleum	KOOK	2	Billings.
	KULR	8	Do.
Phillips	KRTV	3	Great Falls.
	KFBB	5	Do.
	KOOK	2	Billings.
Pondera	KRTV	3	Great Falls.
	KFBB	5	Do.
	CJLH	7	Canada.
Powder River	KOOK	2	Billings.
	KULR	8	Do.
	KOTA	3	Rapid City.
Powell	KXLF	4	Butte.
	KGVO	13	Missoula.
Prairie	KXGN	5	Glendive.
	KYUS	3	Miles City, Mont.
Ravalli	KGVO	13	Missoula.
	KXLF	4	Butte.
Richland	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	KXGN	5	Glendive.
Roosevelt	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.
Rosebud	KOOK	2	Billings.
	KULR	8	Do.
	KYUS	3	Miles City, Mont.
Sanders	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KGVO	13	Missoula.
Sheridan	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	MONTANA—continued		
Silver Bow	KXLF	4	Butte.
	KGVO	13	Missoula.
Stillwater	KOOK	2	Billings.
	KULR	8	Do.
Sweet Grass	KOOK	2	Do.
	KULR	8	Do.
Teton	KRTV	3	Great Falls.
	KFBB	5	Do.
Toole	KRTV	3	Do.
	KFBB	5	Do.
	CFCN	4	Canada.
	CJLH	7	Do.
Treasure	KOOK	2	Billings.
	KULR	8	Do.
Valley	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.
Wheatland	KOOK	2	Billings.
	KULR	8	Do.
Wibaux	KDIX	2	Dickinson, N. Dak.
	KXGN	5	Glendive.
	KUMV	8	Minot-Bismarck.
Yellowstone	KOOK	2	Billings.
	KULR	8	Do.
	NEBRASKA		
Adams	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KHOL	13	Do.
Antelope	KHQL	8	Do.
	KOLN	10	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Arthur	KNOP	2	North Platte.
	KHOL	13	Lincoln-Hastings-Kearney.
Banner	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Blaine	KNOP	2	North Platte.
Boone	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN	10	Do.
Box Butte	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Boyd	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
Brown	KELO	11	Do.
Buffalo	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KHOL	13	Do.
Burt	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Butler	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
	KOLN	10	Lincoln-Hastings-Kearney.
Cass	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN	10	Lincoln-Hastings-Kearney.
Cedar	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO	11	Sioux Falls-Mitchell.
Chase	KHOL	13	Lincoln-Hastings-Kearney.
	KOMC	8	Wichita-Hutchinson.
	NEBRASKA—continued		
Cherry	KELO	11	Sioux Falls-Mitchell.
	KNOP	2	North Platte.
	KDUH	4	Rapid City.
Cheyenne	KTVS	3	Cheyenne.
	KSTF	10	Do.
	KDUH	4	Rapid City.
Clay	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Colfax	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN	10	Lincoln-Hastings-Kearney.
Cuming	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Custer	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KHOL	13	Do.
	KNOP	2	North Platte.
Dakota	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Dawes	KDUH	4	Rapid City.
	KSTF	10	Cheyenne.
Dawson	KOLN	10	Lincoln-Hastings-Kearney.
	KHOL	13	Do.
	KNOP	2	North Platte.
Deuel	KTVS	3	Cheyenne.
	KHOL	13	Lincoln-Hastings-Kearney.
	KNOP	2	North Platte.
Dixon	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Dodge	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Douglas	KMTW	3	Do.
	WOW	6	Do.
	KETV	7	Do.
Dundy	KAYS	7	Wichita-Hutchinson.
	KOMC	8	Do.
	KHOL	13	Lincoln-Hastings-Kearney.
Fillmore	KHTL	4	Do.
	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Franklin	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Frontier	KOLN	10	Do.
	KHOL	13	Do.
	KNOP	2	North Platte.
	KOMC	8	Wichita-Hutchinson.
Furnas	KOLN	10	Lincoln-Hastings-Kearney.
	KHOL	13	Do.
	KOMC	8	Wichita-Hutchinson.
Gage	KOLN	10	Lincoln-Hastings-Kearney.
	KMTV	3	Omaha.
	KETV	7	Do.
Garden	KTVS	3	Cheyenne.
	KSTF	10	Do.
	KHOL	13	Lincoln-Hastings-Kearney.
	KNOP	2	North Platte.
	KDUH	4	Rapid City.

SIGNIFICANTLY VIEWED SIGNALS—Continued

NEBRASKA—continued

County	Call letters, channel number, and market name		
Garfield	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN	10	Do.
Gosper	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Grant	KDUH	4	Rapid City.
	KHOL	13	Lincoln-Hastings-Kearney.
	KNOP	2	North Platte.
Greeley	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Hall	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Hamilton	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Harlan	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Hayes	KHOL	13	Do.
	KNOP	2	North Platte.
	KOMC	8	Wichita-Hutchinson.
Hitchcock	KAYS	7	Do.
	KOMC	8	Do.
	KHOL	13	Lincoln-Hastings-Kearney.
Holt	KHQL	8	Do.
	KOLN	10	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
	KELO	11	Sioux Falls-Mitchell.
Hooker	KNOP	2	North Platte.
	KDUH	4	Rapid City.
Howard	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KHOL	13	Do.
Jefferson	KHTL	4	Do.
	KHAS	5	Do.
	KOLN	10	Do.
Johnson	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN	10	Lincoln-Hastings-Kearney.
Kearney	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Keith	KNOP	2	North Platte.
	KHOL	13	Lincoln-Hastings-Kearney.
Keya Paha	KELO	11	Sioux Falls-Mitchell.
Kimball	KTVS	3	Cheyenne.
	KFBC	5	Do.
	KSTF	10	Do.
	KDUH	4	Rapid City.
Knox	KTIV	4	Sioux City.
	KCAU	9	Do.
	KHQL	8	Lincoln-Hastings-Kearney.
	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
Lancaster	KOLN	10	Lincoln-Hastings-Kearney.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Lincoln	KNOP	2	North Platte.
	KOLN	10	Lincoln-Hastings-Kearney.
	KHOL	13	Do.
Logan	KNOP	2	North Platte.
	KHOL	13	Lincoln-Hastings-Kearney.
Loup	KHAS	5	Do.
	KHQL	8	Do.
	KOLN	10	Do.
McPherson	KNOP	2	North Platte.
	KHOL	13	Lincoln-Hastings-Kearney.
Madison	KTIV	4	Sioux City.
	KCAU	9	Do.
	KHQL	8	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	WOW	6	Omaha.
Merrick	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Morrill	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Nance	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN	10	Do.
	KMTV	3	Omaha.
Nemaha	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
Nuckolls	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Otoe	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN	10	Lincoln-Hastings-Kearney.
Pawnee	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KOLN	10	Lincoln-Hastings-Kearney.
Perkins	KHOL	13	Do.
	KTVS	3	Cheyenne.
	KNOP	2	North Platte.
Phelps	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KHOL	13	Do.
Pierce	KTIV	4	Sioux City.
	KCAU	9	Do.
	KHQL	8	Lincoln-Hastings-Kearney.
	KELO	11	Sioux Falls-Mitchell.
Platte	KHQL	8	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Polk	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN	10	Do.
	KMTV	3	Omaha.
	KETV	7	Do.
Red Willow	KOMC	8	Wichita-Hutchinson.
	KOLN	10	Lincoln-Hastings-Kearney.
	KHOL	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

NEBRASKA—continued

County	Call letters, channel number, and market name		
Richardson	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
	KCMO	5	Kansas City.
	KOLN	10	Lincoln-Hastings-Kearney.
	KQTV	2	St. Joseph.
Rock	KELO	11	Sioux Falls-Mitchell.
Saline	KHTL	4	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KMTV	3	Omaha.
	KETV	7	Do.
Sarpy	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
Saunders	KMTV	3	Do.
	WOW	6	Do.
	KETV	7	Do.
	KOLN	10	Lincoln-Hastings-Kearney.
Scotts Bluff	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Seward	KOLN	10	Lincoln-Hastings-Kearney.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Sheridan	KDUH	4	Rapid City.
Sherman	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KHOL	13	Do.
Sioux	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Stanton	KTIV	4	Sioux City.
	KCAU	9	Do.
	KHQL	8	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Thayer	KHTL	4	Lincoln-Hastings-Kearney.
	KHAS	5	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Thomas	KNOP	2	North Platte.
Thurston	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Valley	KHAS	5	Lincoln-Hastings-Kearney.
	KHQL	8	Do.
	KOLN	10	Do.
	KHOL	13	Do.
Washington	KMTV	3	Omaha.
	WOW	6	Do.
	KETV	7	Do.
Wayne	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
Webster	KHAS	5	Lincoln-Hastings-Kearney.
	KOLN	10	Do.
	KHOL	13	Do.
Wheeler	KHAS	5	Do.
	KHQL	8	Do.
	KOLN	10	Do.
York	KHTL	4	Do.
	KHAS	5	Do.
	KOLN	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

NEVADA

County	Call letters, channel number, and market name		
Churchill	KCRL	4	Reno.
	KOLO	8	Do.
Clark	KORK	3	Las Vegas.
	KHBV	5	Do.
	KLAS	8	Do.
	KSO	13	Do.
Douglas	KTVN	2	Reno.
	KCRL	4	Do.
	KOLO	8	Do.
	KTVU	2	San Francisco.
Elko	KSL	5	Salt Lake City.
	KBOI	2	Boise.
	KTVB	7	Do.
	KOLO	8	Reno.
Esmeralda	KOLO	8	Do.
Eureka	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Humboldt	KOLO	8	Reno.
	KBOI	2	Boise.
	KTVB	7	Do.
Lander	KTVN	2	Reno.
	KOLO	8	Do.
Lincoln	KORK	3	Las Vegas.
	KLAS	8	Do.
	KCPX	4	Salt Lake City.
Lyon	KTVN	2	Reno.
	KCPL	4	Do.
	KOLO	8	Do.
Mineral	KTVN	2	Do.
	KCPL	4	Do.
	KOLO	8	Do.
Nye	KTVN	2	Do.
	KCRL	4	Do.
	KOLO	8	Do.
	KORK	3	Las Vegas.
Ormsby	KTVN	2	Reno.
	KCRL	4	Do.
	KOLO	8	Do.
Pershing	KTVN	2	Do.
	KCRL	4	Do.
	KOLO	8	Do.
Storey	KTVN	2	Do.
	KCRL	4	Do.
	KOLO	8	Do.
Washoe	KTVN	2	Do.
	KCRL	4	Do.
	KOLO	8	Do.
White Pine	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.

NEW HAMPSHIRE

County	Call letters, channel number, and market name		
Belknap	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WMUR	9	Manchester.
Carroll	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Cheshire	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WTIC	3	Hartford-New Haven.
	WMUR	9	Manchester.
	WWLP	22	Springfield, Mass.
Coos	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
	WCAX	3	Burlington-Plattsburgh.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
NEW HAMPSHIRE—continued			
Grafton	WMTW	8	Portland-Poland Spring.
	WCAX	3	Do.
Hillsborough	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
	WMUR	9	Manchester.
Merrimack	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WMUR	9	Manchester.
	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
Rockingham	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
	WMUR	9	Manchester.
Strafford	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WMUR	9	Manchester.
	WCSH	6	Portland-Poland Spring.
	WMTW	8	Do.
	WGAN	13	Do.
Sullivan	WBZ	4	Boston.
	WHDH	5	Do.
	WCAX	3	Burlington-Plattsburgh.
	WMUR	9	Manchester.
	WWLP	22	Springfield, Mass.
NEW JERSEY			
Atlantic	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Bergen	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Burlington	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Camden	KYW		Do.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Cape May	KYW	3	Do.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WKBS	48	Do.
Cumberland	KYW	3	Do.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
NEW JERSEY—continued			
Essex	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Gloucester	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WKBS	48	Do.
Hudson	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Hunterdon	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WTAF	29	Do.
Mercer	KYW	3	Do.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WKBS	48	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Middlesex	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Monmouth	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Morris	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Ocean	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WFIL	6	Philadelphia.
Passaic	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Salem	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
NEW JERSEY—continued			
Somerset	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Sussex	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Union	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Warren	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WPIX	11	Do.
NEW MEXICO			
Bernalillo	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Catron	KOB	4	Do.
	KOAT	7	Do.
	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
Chaves	KBIM	10	Roswell.
	KCBD	11	Lubbock.
Colfax	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
	KRDO	13	Colorado Springs-Pueblo.
Curry	KVII	7	Amarillo.
	KFDA	10	Do.
	KCBD	11	Lubbock.
De Baca	KCBD	11	Do.
	KOAT	7	Albuquerque.
	KBIM	10	Roswell.
Dona Ana	KROD	4	El Paso.
	KTSM	9	Do.
	KELP	13	Do.
Eddy	KBIM	10	Roswell.
	KELP	13	El Paso.
	KCBD	11	Lubbock.
Grant	KROD	4	El Paso.
	KTSM	9	Do.
	KOAT	7	Albuquerque.
Guadalupe	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Harding	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Hidalgo	KTVK	3	Phoenix.
	KOOL	10	Do.
	KTAR	12	Do.
	KVOA	4	Tucson.
	KGUN	9	Do.
	KOLD	13	Do.
Lea North	KBIM	10	Roswell.
	KCBD	11	Lubbock.
Lea South	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
	KCBD	11	Lubbock.
	KBIM	10	Roswell.
Lincoln	KOB	4	Albuquerque.
	KCBD	11	Lubbock.
	KBIM	10	Roswell.
Los Alamos	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Luna	KROD	4	El Paso.
	KTSM	9	Do.
	KELP	13	Do.
McKinley	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Mora	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Otero	KROD	4	El Paso.
	KTSM	9	Do.
	KOAT	7	Albuquerque.
Quay	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
	KOAT	7	Albuquerque.
	KCBD	11	Lubbock.
Rio Arriba	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Roosevelt	KFDA	10	Amarillo.
	KCBD	11	Lubbock.
Sandoval	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
San Juan	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
San Miguel	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.
Santa Fe	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Sierra	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Socorro	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Taos	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Torrance	KOB	4	Do.
	KOAT	7	Do.
	KGGM	13	Do.
Union	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
	KKTV	11	Colorado Springs-Pueblo.
	KRDO	13	Do.
Valencia	KOB	4	Albuquerque.
	KOAT	7	Do.
	KGGM	13	Do.

Census county divisions in split counties:
Lea North: Lea North Central, Lovington, Tatum.
Lea South: All other.

County	Call letters, channel number, and market name		
NEW YORK			
Albany	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
NEW YORK—continued			
Allegany	WGP	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Bronx	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Broome	WNBF	12	Binghamton.
	WBJA	34	Do.
	WINR	40	Do.
Cattaraugus	WGP	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Cayuga	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WHEC	10	Rochester, N.Y.
	WOKR	13	Do.
Chautauqua	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Chemung	WSYE	18	Elmira.
	WENY	36	Do.
	WNBF	12	Binghamton.
	WNEW	5	New York.
Chenango	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WNBF	12	Binghamton.
	WINR	40	Do.
Clinton	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	CBMT	6	Canada.
	CFCF	12	Do.
Columbia	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.
Cortland	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Delaware	WNBF	12	Binghamton.
	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WKTV	2	Utica.
Dutchess	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WTEN	10	Albany-Schenectady Troy.
Erie	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WUTV	29	Do.
Essex	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
Franklin	WCAX	3	Do.
	WPTZ	5	Do.
	CBOT	4	Canada.
	CBMT	6	Do.
	CJSS	8	Do.
	CFCF	12	Do.
Fulton	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.
Genesee	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
Greene	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.
Hamilton	WRGB	6	Do.
	WTEN	10	Do.
Herkimer	WKTV	2	Utica.
	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WHEN	5	Syracuse.
	WNYS	9	Do.
Jefferson	WWNY	7	Watertown-Carthage.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	CKWS	11	Canada.
Kings	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Lewis	WWNY	7	Watertown-Carthage.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	WKTV	2	Utica.
Livingston	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
	WGR	2	Buffalo.
Madison	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WKTV	2	Utica.
Monroe	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
Montgomery	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.
	WKTV	2	Utica.
Nassau	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
New York	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Niagara	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WUTV	29	Do.
	CBLT	6	Canada.
	CFTO	9	Do.
	CHCH	11	Do.
Oneida East	WKTV	2	Utica.
	WUTR	20	Do.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Oneida West	WSYR	3	Do.
	WHEN	5	Do.
	WNYS	9	Do.
	WKTV	2	Utica.

Significantly Viewed Signals—Continued

County	Call letters, channel number, and market name		
NEW YORK—continued			
Onondaga	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Ontario	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Orange	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Orleans	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WUTV	29	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
Oswego	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Otsego	WKTV	2	Utica.
	WRGB	6	Albany-Schenecta Troy.
	WNBF	12	Binghamton.
	WHEN	5	Syracuse.
	WNYS	9	Do.
Putnam	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Queens	WCBS	2	Do.
	WNBC	4	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WNEW	5	Do.
Rensselaer	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.
Richmond	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Rockland	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
St. Lawrence	WWNY	7	Watertown-Carthage.
	WPTZ	5	Burlington-Plattsburgh.
	CBOT	4	Canada.
	CJSS	8	Do.
	CKWS	11	Do.
Saratoga	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.
Schenectady	WRGB	6	Do.
	WTEN	10	Do.
	WAST	13	Do.
Schoharie	WRGB	6	Do.
	WTEN	10	Do.
	WAST	13	Do.
Schuyler	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
Seneca	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
Steuben	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WNBF	12	Binghamton.
	WBEN	4	Buffalo.
	WKBW	7	Do.
	WSYE	18	Elmira.
Suffolk East	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WTIC	3	Hartford-New Haven.
	WNHC	8	Do.
Suffolk West	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Sullivan	WCBS	2	Do.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
Tioga	WNBF	12	Binghamton.
	WBJA	34	Do.
	WINR	40	Do.
Tompkins	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WNBF	12	Binghamton.
Ulster	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.
	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
Warren	WRGB	6	Do.
	WTEN	10	Do.
	WAST	13	Do.
Washington	WRGB	6	Do.
	WTEN	10	Do.
	WAST	13	Do.
Wayne	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
Westchester	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WOR	9	Do.
	WPIX	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
NEW YORK—continued			
Wyoming	WGP	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.
	WOKR	13	Do.
Yates	WSYR	3	Syracuse.
	WHEN	5	Do.
	WNYS	9	Do.
	WROC	8	Rochester, N.Y.
	WHEC	10	Do.

Census county divisions in split counties:

Oneida West: Annsville, Ava, Boonville, Camden, Florence, Forestport, Lee, Rome City, Vernon, Verona, Vienna, Western, Sherrill.

Oneida East: All others.

Suffolk West: Babylon, Huntington, Islip, Smithtown.

Suffolk East: All other.

County	Call letters, channel number, and market name		
NORTH CAROLINA			
Alamance	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WRAL	5	Raleigh-Durham
	WTVD	11	Do.
Alexander	WBTV	3	Charlotte.
	WSOC	9	Do.
	WRET	36	Do.
	WGHP	8	Greensboro-Winston-Salem-High Point.
	WSJS	12	Do.
Alleghany	WFMY	2	Do.
	WGHP	8	Do.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Anson	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WBTW	13	Florence, S.C.
	WGHP	8	Greensboro-Winston-Salem-High Point.
Ashe	WBTV	3	Charlotte.
	WCYB	5	Bristol-Kingsport-Johnson City.
	WGHP	8	Greensboro-Winston-Salem-High Point.
Avery	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
Beaufort	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Bertie	WITN	7	Do.
	WNCT	9	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Bladen	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Brunswick	WWAY	3	Do.
	WECT	6	Do.
Buncombe	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
NORTH CAROLINA—continued			
Burke	WBTV	3	Charlotte.
	WSOC	9	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Cabarrus	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
Caldwell	WBTV	3	Do.
	WSOC	9	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Camden	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Carteret	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Caswell	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WRAL	5	Raleigh-Durham.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Catawba	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WSPA	7	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
Chatham	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
Cherokee	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
Chowan	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Clay	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSB	2	Atlanta.
	WAGA	5	Do.
	WQXI	11	Do.
Cleveland	WBTV	3	Charlotte.
	WSOC	9	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do..
	WLOS	13	Do
Columbus	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
	WBTW	13	Florence, S.C.
Craven	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
NORTH CAROLINA—continued			
Cumberland	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WECT	6	Wilmington, N.C.
Currituck	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVFC	13	Do.
Dare	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WITN	7	Greenville-New Bern-Washington.
Davidson	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	3	Do.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Davie	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Duplin	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Durham	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
	WFMY	2	Greensboro-Winston Salem-High Point.
Edgecombe	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Forsyth	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Franklin	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WNCT	9	Greenville-New Bern-Washington.
Gaston	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WLOS	13	Greenville-Spartanburg-Asheville
Gates	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton
	WAVY	10	Do.
	WVEC	13	Do.
Graham	WATE	6	Knoxville.
	WBIR	10	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
Granville	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
Greene	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Guilford	WFMY	2	Greensboro-Winston Salem-High Point
	WGHP	8	Do.
	WSJS	12	Do.
Halifax	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Harnett	WRAL	5	Do.
	WTVD	11	Do.
	WECT	6	Wilmington, N.C.
Haywood	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Henderson	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.
Hertford	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Hoke	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WBTW	13	Florence, S.C.
	WGHP	8	Greensboro-Winston Salem-High Point.
	WECT	6	Wilmington, N.C.
Hyde	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Iredell	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WGHP	8	Greensboro-Winston Salem-High Point.
	WSJS	12	Do.
Jackson	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Johnston	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Jones	WITN	7	Do.
	WNCT	9	Do.
	WCTI	12	Do.
Lee	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
Lenoir	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
	WRAL	5	Raleigh-Durham.
Lincoln	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WSPA	7	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
McDowell	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
NORTH CAROLINA—continued			
Macon	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WSB	2	Atlanta.
Madison	WFBC	4	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
Martin	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Mecklenburg	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
Mitchell	WBTV	3	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Montgomery	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Moore	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WECT	6	Wilmington, N.C.
Nash	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
New Hanover	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Northampton	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Onslow	WITN	7	Do.
	WNCT	9	Do.
	WCTI	12	Do.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Orange	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
Pamlico	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
Pasquotank	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WYAH	27	Do.
Pender	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Perquimans	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Person	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WRDU	28	Do.
	WFMY	2	Greensboro-Winston Salem-High Point.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Pitt	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WCTI	12	Do.
	WRAL	5	Raleigh-Durham.
Polk	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
Randolph	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Richmond	WBTV	3	Charlotte.
	WSOC	9	Do.
	WBTW	13	Florence, S.C.
	WGHP	8	Greensboro-Winston Salem-High Point.
Robeson	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
	WBTW	13	Florence, S.C.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Rockingham	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Rowan	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Rutherford	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Sampson	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Scotland	WBTW	13	Florence, S.C.
	WGHP	8	Greensboro-Winston Salem-High Point.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WECT	6	Wilmington, N.C.
Stanly	WBTV	3	Charlotte.
	WSOC	9	Do.
	WGHP	8	Greensboro-Winston Salem-High Point.
Stokes	WFMY	2	Do.
	WGHP	8	Do.
	WSJS	12	Do.
Surry	WFMY	2	Do.
	WGHP	8	Do.
	WSJS	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	NORTH CAROLINA—continued		
Swain	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Transylvania	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.
Tyrrell	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Union	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
Vance	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Wake	WRAL	5	Do.
	WTVD	11	Do.
Warren	WRAL	5	Do.
	WTVD	11	Do.
	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
Washington	WITN	7	Do.
	WNCT	9	Do.
	WCTI	12	Do.
Watauga	WBTV	3	Charlotte.
	WCYB	5	Bristol-Kingsport-Johnson City.
	WGHP	8	Greensboro-Winston Salem-High Point.
Wayne	WITN	7	Greenville-New Bern-Washington.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Wilkes	WGHP	8	Greensboro-Winston Salem-High Point.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Wilson	WITN	7	Greenville-Winston Salem-High Point.
	WNCT	9	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
Yadkin	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Yancey	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
	NORTH DAKOTA		
Adams	KDIX	2	Dickinson, N. Dak.
	KFYR	5	Minot-Bismarck.
Barnes	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Benson	KXJB	4	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
	KXMC	13	Minot-Bismarck.
Billings	KDIX	2	Dickinson, N. Dak.
	KFYR	5	Minot-Bismarck.
Bottineau	KMOT	10	Do.
	KXMC	13	Do.
Bowman	KDIX	2	Dickinson, N. Dak.
	KFYR	5	Minot-Bismarck.
	KOTA	3	Rapid City.
Burke	KUMV	8	Minot-Bismarck.
	KMOT	10	Do.
	KXMC	13	Do.
	CKOS	3	Canada.
Burleigh	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Cass	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Cavalier	WDAZ	8	Do.
	KCND	12	Pembina.
	CJAY	7	Canada.
Dickey	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Divide	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.
	CKCK	2	Canada.
Dunn	KDIX	2	Dickinson, N. Dak.
	KFYR	5	Minot-Bismarck.
	KUMV	8	Do.
Eddy	KXJB	4	Fargo.
	WDAZ	8	Do.
	KTHI	11	Do.
Emmons	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Foster	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
Golden Valley	KUMV	8	Minot-Bismarck.
	KDIX	2	Dickinson, N. Dak.
Grand Forks	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
	CJAY	7	Canada.
Grant	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Griggs	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
Hettinger	KFYR	5	Minot-Bismarck.
	KDIX	2	Dickinson, N. Dak.
Kidder	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
La Moure	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Logan	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
McHenry	KMOT	10	Do.
	KXMC	13	Do.
McIntosh	KFYR	5	Do.
	KXMB	12	Do.
McKenzie	KUMV	8	Do.
	KXMD	11	Do.
McLean	KFYR		Do.
	KXMB	12	Do.
	KXMC	13	Do.
Mercer	KFYR	5	Do.
	KXMC	13	Do.
Morton East	KFYR	5	Do.
	KXMB	12	Do.
Morton West	KFYR	5	Do.
	KXMB	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	NORTH DAKOTA—continued		
Mountrail	KUMV	8	Minot-Bismarck.
	KMOT	10	Do.
	KXMC	13	Do.
Nelson	KXJB	4	Fargo.
	WDAY	6	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
Oliver	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Pembina	KCND	12	Pembina.
	KXJB	4	Fargo.
	WDAZ	8	Do.
	CBWT	6	Canada.
	CJAY	7	Do.
Pierce	KMOT	10	Minot-Bismarck.
	KXMC	13	Do.
Ramsey	KXJB	4	Fargo.
	WDAZ	8	Do.
	KTHI	11	Do.
Ransom	KXJB	4	Do.
	WDAY	6	Do.
	KTHI	11	Do.
Renville	KMOT	10	Minot-Bismarck.
	KXMC	13	Do.
Richland	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
	WTCN	11	Minneapolis-St. Paul.
Rolette	KMOT	10	Minot-Bismarck.
	KXMC	13	Do.
	CKX	5	Canada.
Sargent	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Sheridan	KFYR	5	Minot-Bismarck.
	KXMC	13	Do.
Sioux	KFYR	5	Do.
	KXMB	12	Do.
Slope	KDIX	2	Dickinson, N. Dak.
Stark	KDIX	2	Do.
	KFYR	5	Minot-Bismarck.
Steele	KXJB	4	Fargo.
	WDAY	6	Do.
	KTHI	11	Do.
Shutsman	KXJB	4	Do.
	WDAY	6	Do.
	KTHI	11	Do.
	KFYR	5	Minot-Bismarck.
Towner	KXJB	4	Fargo.
	WDAZ	8	Do.
Traill	KXJB	4	Do.
	WDAY	6	Do.
	KTHI	11	Do.
Walsh	KXJB	4	Do.
	WDAZ	8	Do.
	KTHI	11	Do.
	KCND	12	Pembina.
Ward	KMOT	10	Minot-Bismarck.
	KXMC	13	Do.
Wells	KFYR	5	Do.
	KXMC	13	Do.
	KXJB	4	Fargo.
	WDAZ	8	Do.
	KTHI	11	Do.
Williams	KUMV	8	Minot-Bismarck.
	KXMD	11	Do.

Census county divisions in split counties:
Morton East: Mandan, Mandan North, Mandan South.
Morton West: All other.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	OHIO		
Adams	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
Allen	WIMA	35	Lima.
	WHIO	7	Dayton.
	WANE	15	Fort Wayne.
	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Ashland	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Ashtabula	WKYC	3	Do.
	WEWS	5	Do.
	WJW	8	Do.
	WICU	12	Erie.
	WJET	24	Do.
	WSEE	35	Do.
Athens	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WLWC	4	Columbus, Ohio.
Auglaize	WLWD	2	Dayton.
	WHIO	7	Do.
	WIMA	35	Lima.
Belmont	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Brown	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Butler	WLWT	5	Do.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
Carroll	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Champaign	WLWD	2	Dayton.
	WHIO	7	Do.
	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Clark	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Clermont	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Clinton	WLWT	5	Do.
	WCPO	9	Do.
	WKRC	12	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
OHIO—continued			
Columbiana	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WTRF	7	Wheeling-Steubenville
	WSTV	9	Do.
	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
Coshocton	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WTRF	7	Wheeling-Stuebenville
	WSTV	9	Do.
	WHIZ	18	Zanesville.
Crawford	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WTOL	11	Toledo
	WSPD	13	Do.
Cuyahoga	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Darke	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WCPO	9	Cincinnati.
Defiance	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Delaware	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Erie	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
Fairfield	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Fayette	WLWC	4	Do.
	WTVN	6	Do.
	WBNS	10	Do.
	WHIO	7	Dayton.
Franklin	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Fulton	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Gallia	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Geauga	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Greene	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WCPO	9	Cincinnati.
	WKRC	12	Do.
Guernsey	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Hamilton	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Hancock	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Hardin	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
Harrison	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Henry	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Highland	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WHIO	7	Dayton.
Hocking	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Holmes	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
Huron	WKYC	3	Do.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
	WTOL	11	Toledo.
	WSPD	13	Do.
Jackson	WSAZ	3	Charleston-Huntington
	WCHS	8	Do.
	WHTN	13	Do.
Jefferson	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Knox	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Lake	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Lawrence	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Licking	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	OHIO—continued		
Logan	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
Lorain	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Lucas	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WJBK	2	Detroit.
	WXYZ	7	Do.
	WKBD	50	Do.
Madison	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Mahoning	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
Marion	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Medina	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Meigs	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Mercer	WLWD	2	Dayton.
	WHIO	7	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
	WIMA	35	Lima.
Miami	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WKTR	16	Kettering (Dayton).
Monroe	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	WDTV	5	Clarksburg-Weston.
	WTAE	4	Pittsburgh.
Montgomery	WLWD	2	Dayton.
	WHIO	7	Do.
	WKTR	16	Do.
	WKEF	22	Do.
	WCPO	9	Cincinnati.
	WKRC	12	Do.
Morgan	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WTAP	15	Parkersburg.
	WHIZ	18	Zanesville.
Morrow	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Muskingum	WHIZ	18	Zanesville.
	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Noble	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Ottawa	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WEWS	5	Cleveland.
	WJBK	2	Detroit.
Paulding	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Perry	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
	WHIZ	18	Zanesville.
Pickaway	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Pike	WLWC	4	Do.
	WTVN	6	Do.
	WBNS	10	Do.
	WSAZ	3	Charleston-Huntington.
	WHTN	13	Do.
Portage	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Preble	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
Putnam	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WIMA	35	Lima.
Richland	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WBNS	10	Columbus.
Ross	WLWC	4	Do.
	WTVN	6	Do.
	WBNS	10	Do.
Sandusky	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
Scioto	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Seneca	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WEWS	5	Cleveland.
Shelby	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
Stark	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Summit	WKYC	3	Do.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
	WAKR	23	Akron.
Trumbull	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	OHIO—continued		
Tuscarawas	WKYC	3	Cleveland
	WEWS	5	Do.
	WJW	8	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Union	WLWC	4	Columbus, Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Van Wert	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
	WIMA	35	Lima.
Vinton	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WLWC	4	Columbus. Ohio.
	WTVN	6	Do.
	WBNS	10	Do.
Warren	WLWT	5	Cincinnati.
	WCPO	9	Do.
	WKRC	12	Do.
	WXIX	19	Do.
	WLWD	2	Dayton.
	WHIO	7	Do.
	WKEF	22	Do.
Washington	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WTAP	15	Parkersburg.
	WTRF	7	Wheeling-Steubenville.
Wayne	WKYC	3	Cleveland.
	WEWS	5	Do.
	WJW	8	Do.
	WUAB	43	Do.
	WKBF	61	Do.
Williams	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WANE	15	Fort Wayne.
	WPTA	21	Do.
	WKJG	33	Do.
Wood	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WKBD	50	Detroit.
Wyandot	WTOL	11	Toledo.
	WSPD	13	Do.
	WDHO	24	Do.
	WLWC	4	Columbus, Ohio.
	WBNS	10	Do.
	OKLAHOMA		
Adair	KIEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Alfalfa	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Atoka	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
Beaver	KTVC	6	Wichita-Hutchinson,
	KGLD	11	Do.
	KUPK	13	Do.
Beckham	KFDA	10	Amarillo.
	KSWO	7	Wichita Falls-Lawton.
Blaine	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Bryan	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
	KDFW	4	Dallas-Fort Worth.
	WFAA	8	Do.
	KTVT	11	Do.
	OKLAHOMA—continued		
Caddo	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Canadian	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
Carter	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
	KWTV	9	Oklahoma City.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
Cherokee	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Choctaw	KTVT	11	Dallas-Fort Worth.
	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
Cimarron	KGNC	4	Amarillo.
	KVII	7	Do.
	KDFA	10	Do.
Cleveland	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Coal	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
	WKY	4	Oklahoma City.
Comanche	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Cotton	KFDX	3	Do.
	KAUZ	6	Do.
	KSWO	7	Do.
Craig	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KOAM	7	Joplin-Pittsburg.
Creek	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Custer	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Delaware	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
Dewey	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Ellis	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
	KGNC	4	Amarillo.
	KFDA	10	Do.
Garfield	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Garvin	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEN	10	Ardmore-Ada.
Grady	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Grant	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
Greer	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	KFDA	10	Amarillo.
Harmon	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
OKLAHOMA—continued			
Harper	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTVC	6	Wichita-Hutchinson.
	KUPK	13	Do.
Haskell	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KFSA	5	Fort Smith.
Hughes	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEN	10	Ardmore-Ada.
	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Jackson	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Jefferson	KFDX	3	Do.
	KAUZ	6	Do.
	KSWO	7	Do.
	KXII	12	Ardmore-Ada.
Johnston	KTEN	10	Do.
	KXII	12	Do.
Kay	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEW	2	Tulsa.
	KOTV	6	Do.
	KARD	3	Wichita-Hutchinson.
	KAKE	10	Do.
Kingfisher	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Kiowa	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	WKY	4	Oklahoma City.
	KOCO	5	Do.
Latimer	KTUL	8	Tulsa.
	KTEN	10	Ardmore-Ada.
	KFSA	5	Fort Smith.
Le Flore	KFSA		Do.
	KTUL	8	Tulsa.
Lincoln	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Logan	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
Love	KDFW	4	Dallas-Fort Worth.
	WFAA	8	Do.
	KTVT	11	Do.
	KXII	12	Ardmore-Ada.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
McClain	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
McCurtain	KTBS	3	Shreveport-Texarkana.
	KTAL	12	Do.
	KSFA	5	Fort Smith.
McIntosh	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Major	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Marshall	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
	KDFW	4	Dallas-Fort Worth.
Mayes	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Murray	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
Muskogee	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Noble	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Nowata	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Okfuskee	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
	KTEN	10	Ardmore-Ada.
	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Oklahoma	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
Okmulgee	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Osage	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
Ottawa	KOAM	7	Joplin-Pittsburg.
	KODE	12	Do.
	KUHI	16	Do.
	KOTV	6	Tulsa.
	KTUL	8	Do.
Pawnee	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
Payne	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEW	2	Tulsa.
	KOTV	6	Do.
Pittsburg	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
	KTEN	10	Ardmore-Ada.
Pontotoc	KTEN	10	Do.
	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Pottawatomie	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
Pushmataha	KTEN	10	Ardmore-Ada.
	KXII	12	Do.
Roger Mills	KFDA	10	Amarillo.
	WKY	4	Oklahoma City.
Rogers	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Seminole	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KTEN	10	Ardmore-Ada.
Sequoyah	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
	KSFA	5	Fort Smith.
Stephens	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Texas	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
	KTVC	6	Wichita-Hutchinson.
	KGLD	11	Do.
	KUPK	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	OKLAHOMA—continued		
Tillman	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Tulsa	KTEW	2	Tulsa.
	KOTV	6	Do.
	KTUL	8	Do.
Wagoner	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
Washington	KTEW	2	Do.
	KOTV	6	Do.
	KTUL	8	Do.
Washita	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Woods	WKY	4	Oklahoma City.
	KOCO	5	Do.
	KWTV	9	Do.
Woodward	WKY	4	Do.
	KOCO	5	Do.
	KWTV	9	Do.
	OREGON		
Baker	KBOI	2	Boise.
	KTVB	7	Do.
Benton	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KPTV	12	Do.
	KEZI	9	Eugene.
	KVAL	13	Do.
Clackamas	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Clatsop	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KING	5	Seattle-Tacoma.
Columbia	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Coos	KCBY	11	Eugene.
	KOBI	5	Medford.
Crook	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KEZI	9	Eugene.
Curry	KIEM	3	Eureka.
	KVIQ	6	Do.
Deschutes	KOIN	6	Portland, Oreg.
	KGW	8	Do.
	KPTV	12	Do.
	KEZI	9	Eugene.
Douglas	KPIC	4	Do.
	KEZI	9	Do.
	KOBI	5	Medford.
Gilliam	KEPR	19	Yakima.
	KNDU	25	Do.
	KOIN	6	Portland, Oreg.
	KGW	8	Do.
	KPTV	12	Do.
Grant	KBOI	2	Boise.
	KTVB	7	Do.
Harney	KOIN	6	Portland, Oreg.
	KTVB	7	Boise.
Hood River	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	OREGON—continued		
Jackson	KOBI	5	Medford.
	KMED	10	Do.
Jefferson	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
Josephine	KOBI	5	Medford.
	KMED	10	Do.
Klamath	KOTI	2	Klamath Falls.
	KMED	10	Medford.
Lake	KOTI	2	Klamath Falls.
Lane Inner	KEZI	9	Eugene.
	KVAL	13	Do.
Lane Outer	KEZI	9	Do.
	KVAL	13	Do.
	KOIN	6	Portland, Oreg.
	KPTV	12	Do.
Lincoln	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KEZI	9	Eugene.
	KVDO	3	Salem, Oreg.
Linn	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KEZI	9	Eugene.
	KVAL	13	Do.
	KVDO	3	Salem, Oreg.
Malheur	KBOI	2	Boise.
	KTVB	7	Do.
Marion	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KVDO	3	Salem, Oreg.
Morrow	KEPR	19	Yakima.
	KNDU	25	Do.
	KVEW	42	Do.
	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
Multnomah	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Polk	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KVDO	3	Salem, Oreg.
Sherman	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Tillamook	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KVDO	3	Salem, Oreg.
Umatilla	KEPR	19	Yakima.
	KNDU	25	Do.
	KVEW	42	Do.
Union	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KTVB	7	Boise.
Wallowa	KREM		Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Wasco	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Washington	KATU	2	Do.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

OREGON—continued

County	*Call letters, channel number, and market name*		
Yamhill	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KVDO	3	Salem, Oreg.
Wheeler	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
	KOMO	4	Seattle-Tacoma.

[1] Census county divisions in split counties:
Lane Inner: Eugene, Springfield, Eugene West.
Lane Outer: All other.

PENNSYLVANIA

County	*Call letters, channel number, and market name*		
Adams	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WTTG	5	Washington, D.C.
Allegheny	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
Armstrong	KDKA	2	Do.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WJAC	6	Johnstown-Altoona.
Beaver	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WSTV	9	Wheeling-Steubenville.
Bedford	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Berks	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WKBS	48	Do.
	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
Blair	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Bradford	WNBF	12	Binghamton.
	WSYE	18	Elmira.
	WENY	36	Do.
Bucks	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Butler	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WJAC	6	Johnstown-Altoona.
Cambria	WJAC	6	Do.
	WFBG	10	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Cameron	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
	WBEN	2	Buffalo.
	WKBW	7	Do.
Carbon	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WNEP	16	Wilkes-Barre-Scranton.
Centre	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Chester	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Clarion	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WJAC	6	Johnstown-Altoona.
Clearfield	WJAC	6	Do.
	WFBG	10	Do.
Clinton	WJAC	6	Do.
	WFBG	10	Do.
	WNEW	5	New York.
	WPIX	11	Do.
	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Columbia	WNEP	16	Do.
	WDAU	22	Do.
	WBRE	28	Do.
Crawford	WICU	12	Erie.
	WJET	24	Do.
	WSEE	35	Do.
Cumberland	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WHP	21	Do.
	WTPA	27	Do.
Dauphin	WGAL	8	Do.
	WHP	21	Do.
	WTPA	27	Do.
Delaware	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Elk	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Erie	WICU	12	Erie.
	WJET	24	Do.
	WSEE	35	Do.
Fayette	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Forest	WICU	12	Erie.
	WJAC	6	Johnstown-Altoona.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Franklin	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
Fulton	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Greene	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WTRF	7	Wheeling-Steubenville.
Huntingdon	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Indiana	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
PENNSYLVANIA—continued			
Jefferson	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Juniata	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WHP	21	Do.
	WTPA	27	Do.
	WFBG	10	Johnstown-Altoona.
Lackawanna	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Lancaster	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WLYH	15	Do.
	WTPA	27	Do.
	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
Lawrence	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
Lebanon	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WLYH	15	Do.
	WHP	21	Do.
	WTPA	27	Do.
Lehigh	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
Luzerne	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Lycoming	WNEP	16	Do.
	WDAU	22	Do.
	WBRE	28	Do.
	WFBG	10	Johnstown-Altoona.
McKean	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Mercer	WFMJ	21	Youngstown.
	WKBN	27	Do.
	WYTV	33	Do.
	KDKA	2	Pittsburgh.
	WIIC	11	Do.
Mifflin	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WJAC	6	Johnstown-Altoona.
	WFBG	10	Do.
Monroe	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
Montgomery	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Montour	Over 90 percent cable penetration.		
Northampton	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WNEW	5	New York.
	WOR	9	Do.
	WPIX	11	Do.
Northumberland, over 90% cable penetration.			
Perry	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WHP	21	Do.
	WTPA	27	Do.
Philadelphia	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WPHL	17	Do.
	WTAF	29	Do.
	WKBS	48	Do.
Pike	WCBS	2	New York.
	WNBC	4	Do.
	WNEW	5	Do.
	WABC	7	Do.
	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Potter	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
Schuylkill	KYW	3	Philadelphia.
	WFIL	6	Do.
	WCAU	10	Do.
	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
Synder	WGAL	8	Do.
	WHP	21	Do.
	WTPA	27	Do.
	WNEP	16	Wilkes-Barre-Scranton.
	WBRE	28	Do.
Somerest	WJAC	6	Johnstown-Altoona.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Sullivan	WNBF	12	Binghamton.
	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Susquehanna	WNBF	12	Binghamton.
	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Tioga	WSYE	18	Elmira.
	WENY	36	Do.
	WNBF	12	Binghamton.
Union	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
Venango	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WICU	12	Erie.
	WJAC	6	Johnstown-Altoona.
Warren	WGR	2	Buffalo.
	WBEN	4	Do.
	WKBW	7	Do.
	WICU	12	Erie.
Washington	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Wayne	WNEP	16	Wilkes-Barre-Scranton.
	WDAU	22	Do.
	WBRE	28	Do.
	WNBF	12	Binghamton.
	WNBC	4	New York.
	WNEW	5	Do.
Westmoreland	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
	WJAC	6	Johnstown-Altoona.
Wyoming	WNEP	16	Wilkes-Barre-Scranton
	WDAU	22	Do.
	WBRE	28	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

PENNSYLVANIA—continued

County	Call letters, channel number, and market name		
York	WGAL	8	Harrisburg-York-Lancaster-Lebanon.
	WTPA	27	Do.
	WSBA	43	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	12	Do.

RHODE ISLAND

County	Call letters, channel number, and market name		
Bristol	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WNAC	7	Do.
	WSBK	38	Do.
Kent	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WHDH	5	Boston.
	WNAC	7	Do.
	WSBK	38	Do.
Newport	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WNAC	7	Boston.
	WSBK	38	Do.
	WKBG	56	Do.
Providence	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WSBK	38	Do.
	WKBG	56	Do.
Washington	WTEV	6	Providence.
	WJAR	10	Do.
	WPRI	12	Do.
	WBZ	4	Boston.
	WHDH	5	Do.
	WNAC	7	Do.
	WKBG	56	Do.

SOUTH CAROLINA

County	Call letters, channel number, and market name		
Abbeville	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WJBF	6	Augusta.
Aiken	WJBF	6	Do.
	WRDW	12	Do.
	WATU	26	Do.
Allendale	WJBF	6	Do.
	WRDW	12	Do.
Anderson	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Bamberg	WJBF	6	Augusta.
	WRDW	12	Do.
	WCSC	5	Charleston, S.C.
	WIS	10	Columbia, S.C.
Barnwell	WJBF	6	Augusta.
	WRDW	12	Do.
	WIS	10	Columbia, S.C.
Beaufort	WUSN	2	Charleston,S.C.
	WCIV	4	Do.
	WCSC	5	Do.
	WSAV	3	Savannah.
	WTOC	11	Do.
Berkely	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

SOUTH CAROLINA—continued

County	Call letters, channel number, and market name		
Calhoun	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WRDW	12	Augusta.
	WUSN	2	Charleston, S.C.
	WCSC	5	Do.
Charleston	WUSN	2	Do.
	WCIV	4	Do.
	WCSC	5	Do.
Cherokee	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
	WSOC	9	Do.
Chester	WBTV	3	Do.
	WSOC	9	Do.
	WIS	10	Columbia, S.C.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Chesterfield	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WIS	10	Columbia, S.C.
	WBTW	13	Florence, S.C.
Clarendon	WIS	10	Columbia, S.C.
	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
	WBTW	13	Florence, S.C.
Colleton	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Darlington	WBTW	13	Florence, S.C.
	WIS	10	Columbia, S.C.
Dillon	WBTW	13	Florence, S.C.
	WIS	10	Columbia, S.C.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Dorchester	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Edgefield	WJBF	6	Augusta.
	WRDW	12	Do.
Fairfield	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
	WSPA	7	Greenville-Spartanburg-Asheville.
Florence	WBTW	13	Florence, S.C.
	WIS	10	Columbia, S.C.
Georgetown	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Greenville	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Greenwood	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.
	WJBF	6	Augusta.
Hampton	WJBF	6	Do.
	WRDW	12	Do.
	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
	WSAV	3	Savannah.
	WTOC	11	Do.
Horry	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
	WCSC	5	Charleston, S.C.
	WBTW	13	Florence. S.C.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
SOUTH CAROLINA—continued			
Jasper	WSAV	3	Savannah.
	WTOC	11	Do.
	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Kershaw	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
	WBTW	13	Florence, S.C.
Lancaster	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WIS	10	Columbia, S.C.
Laurens	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Lee	WIS	10	Columbia, S.C.
	WBTW	13	Florence, S.C.
Lexington	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
McCormick	WJBF	6	Augusta.
	WRDW	12	Do.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
Marion	WBTW	13	Florence, S.C.
	WIS	10	Columbia, S.C.
	WWAY	3	Wilmington, N.C.
	WECT	6	Do.
Marlboro	WBTW	13	Florence, S.C.
	WIS	10	Columbia, S.C.
	WECT	6	Wilmington, N.C.
Newberry	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WJBF	6	Augusta.
	WIS	10	Columbia. S.C.
Oconee	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do
Orangeburg	WIS	10	Columbia, S.C.
	WJBF	6	Augusta.
	WRDW	12	Do.
	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
Pickens	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
Richland	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
Saluda	WJBF	6	Augusta.
	WRDW	12	Do.
	WIS	10	Columbia, S.C.
	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
Spartanburg	WFBC	4	Do.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
Sumter	WIS	10	Columbia, S.C.
	WNOK	19	Do.
	WOLO	25	Do.
	WBTW	13	Florence, S.C.
Union	WFBC	4	Greenville-Spartanburg-Asheville.
	WSPA	7	Do.
	WLOS	13	Do.
	WBTV	3	Charlotte.
Williamsburg	WUSN	2	Charleston, S.C.
	WCIV	4	Do.
	WCSC	5	Do.
	WIS	10	Columbia, S.C.
	WBTW	13	Florence, S.C.
York	WBTV	3	Charlotte.
	WSOC	9	Do.
	WCCB	18	Do.
	WRET	36	Do.
	WSPA	7	Greenville-Spartanburg-Asheville.
	WLOS	13	Do.
SOUTH DAKOTA			
Aurora	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
Beadle	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
Bennett	KOTA	3	Rapid City.
	KDUH	4	Do.
Bon Homme	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Brookings	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
Brown	KELO	11	Do.
	KSOO	13	Do.
Brule	KORN	5	Do.
	KELO	11	Do.
Buffalo	KORN	5	Do.
	KELO	11	Do.
Butte	KOTA	3	Rapid City.
	KRSD	7	Do.
Campbell	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Charles Mix	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
Clark	KELO	11	Do.
	KSOO	13	Do.
Clay	KTIV	4	Sioux City.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Codington	KELO	11	Do.
	KSOO	13	Do.
Corson	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
Custer	KOTA	3	Rapid City.
	KRSD	7	Do.
Davison	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
Day	KELO	11	Do.
	KSOO	13	Do.
Deuel	KELO	11	Do.
	KSOO	13	Do.
Dewey	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
	KELO	11	Sioux Falls-Mitchell.
Douglas	KORN	5	Do.
	KELO	11	Do.
Edmunds	KELO	11	Do.
	KSOO	13	Do.
Fall River	KOTA	3	Rapid City.
	KDUH	4	Do.
	KSTF	10	Cheyenne.
Faulk	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
SOUTH DAKOTA—continued			
Grant	KELO	11	Sioux Falls-Mitchell.
	KCMT	7	Alexandria, Minn.
	KMSP	9	Minneapolis-St. Paul.
	WTCN	11	Do.
Gregory	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
Haakon	KOTA	3	Rapid City.
	KELO	11	Sioux Falls-Mitchell.
Hamlin	KELO	11	Do.
	KSOO	13	Do.
Hand	KELO	11	Do.
	KSOO	13	Do.
Hanson	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
Harding	KOTA	3	Rapid City.
Hughes	KELO	11	Sioux Falls-Mitchell.
Hutchinson	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
Hyde	KELO	11	Do.
	KSOO	13	Do.
Jackson	KOTA	3	Rapid City.
	KELO	11	Sioux Falls-Mitchell.
Jerauld	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
Jones	KELO	11	Do.
Kingsbury	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
Lake	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
Lawrence	KOTA	3	Rapid City.
	KRSD	7	Do.
Lincoln	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Lyman	KELO	11	Sioux Falls-Mitchell.
Mc Cook	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
Mc Pherson	KELO	11	Do.
	KSOO	13	Do.
	KFYR	5	Minot-Bismarck.
Marshall	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
	KXJB	4	Fargo.
Meade	KOTA	3	Rapid City.
	KRSD	7	Do.
	KWGN	2	Denver.
Mellette	KELO	11	Sioux Falls-Mitchell.
Miner	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
Minnehaha	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
	KCAU	9	Sioux City.
Moody	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
Pennington	KOTA	3	Rapid City.
	KRSD	7	Do.
Perkins	KFYR	5	Minot-Bismarck.
	KDIX	2	Dickinson, N. Dak.
	KOTA	3	Rapid City.
Potter	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
	KFYR	5	Minot-Bismarck.
Roberts	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
	WDAY	6	Fargo.
Sanborn	KORN	5	Sioux Falls-Mitchell.
	KELO	11	Do.
	KSOO	13	Do.
Shannon	KOTA	3	Rapid City.
	KDUH	4	Do.
	KRSD	7	Do.
Spink	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Stanley	KELO	11	Do.
	KWGN	2	Denver.
	KOA	4	Do.
	KBTV	9	Do.
Sully	KELO	11	Sioux Falls-Mitchell.
Todd	KELO	11	Do.
Tripp	KORN	5	Do.
	KELO	11	Do.
Turner	KORN	5	Do.
	KELO	11	Do.
	KSOO	13	Do.
	KTIV	4	Sioux City.
	KCAU	9	Do.
Union	KTIV	4	Do.
	KCAU	9	Do.
	KMEG	14	Do.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Walworth	KFYR	5	Minot-Bismarck.
	KXMB	12	Do.
	KELO	11	Sioux Falls-Mitchell.
Washabaugh	KOTA	3	Rapid City.
	KELO	11	Sioux Falls-Mitchell.
Yankton	KTIV	4	Sioux City.
	KCAU	9	Do.
	KELO	11	Sioux Falls-Mitchell.
	KSOO	13	Do.
Ziebach	KOTA	3	Rapid City.
TENNESSEE			
Anderson	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Bedford	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Benton	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Bledsoe	WRCB	3	Chattanoogo.
	WTVC	9	Do.
	WDEF	12	Do.
Blount	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Bradley	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Campbell	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Cannon	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Carroll	WSM	4	Do.
	WLAC	5	Do.
	SIX	8	Do.
	WBBJ	7	Jackson, Tenn.
	WREC	3	Memphis.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
Carter	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WKPT	19	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	TENNESSEE—continued		
Cheatham	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Chester	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Claiborne	WATE	6	Knoxville.
	WBIR	10	Do.
Clay	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Cocke	WATE	6	Knoxville.
	WBIR	10	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
Coffee	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Crockett	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Cumberland	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVC	9	Chattanooga.
Davidson	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Decatur	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
	WBBJ	7	Jackson, Tenn.
De Kalb	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Dickson	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Dyer	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
	KFVS	12	Paducah-Cape Girardeau-Harrisburg.
Fayette	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Fentress	WATE	6	Knoxville.
	WBIR	10	Do.
Franklin	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WTVC	9	Chattanooga.
	WDEF	12	Do.
Gibson	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Giles	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Grainger	WATE	6	Knoxville.
	WBIR	10	Do.
Greene	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WLOS	13	Greenville-Spartanburg-Asheville
	WATE	6	Knoxville.
	WBIR	10	Do.
Grundy	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Hamblen	WATE	6	Knoxville.
	WBIR	10	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
	WLOS	13	Greenville-Spartanburg-Asheville.
Hamilton	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Hancock	WATE	6	Knoxville.
	WBIR	10	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
Hardeman	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Hardin	WBBJ	7	Jackson, Tenn.
	WREC	3	Memphis.
	WMC	5	Do.
Hawkins	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WLOS	13	Greenville-Spartanburg-Ashville.
	WATE	6	Knoxville.
	WBIR	10	Do.
Haywood	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Henderson	WBBJ	7	Do.
	WREC	3	Memphis.
	WMC	5	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
Henry	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
Hickman	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Houston	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Humphreys	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Jackson	WSML	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Jefferson	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
Johnson	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Knox	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Lake	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Lauderdale	WREC	3	Do.
	WMC	5	Do.
	WHBQ	13	Do.
Lawrence	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
TENNESSEE—continued			
Lewis	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Lincoln	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Loudon	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
McMinn	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WATE	6	Knoxville.
McNairy	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
	WBBJ	7	Jackson, Tenn.
Macon	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Madison	WBBJ	7	Jackson, Tenn.
	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Marion	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Marshall	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Maury	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Meigs	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Monroe	WATE	6	Knoxville.
	WBIR	10	Do.
	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Montgomery	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Moore	WHNT	19	Huntsville-Decatur-Florence.
	WAAY	31	Do.
	WMSL	48	Do.
	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Morgan	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVC	9	Chattanooga.
Obion	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	WBBJ	7	Jackson, Tenn.
Overton	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Perry	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Pickett	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Polk	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
	WATL	36	Atlanta.
Putnam	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Rhea	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Roane	WATE	6	Knoxville.
	WBIR	10	Do.
	WRCB	3	Chattanooga.
	WTVC	9	Do.
	WDEF	12	Do.
Robertson	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Rutherford	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Scott	WATE	6	Knoxville.
	WBIR	10	Do.
	WDEF	12	Chattanooga.
Sequatchie	WRCB	3	Do.
	WTVC	9	Do.
	WDEF	12	Do.
Sevier	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Shelby	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Smith	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Stewart	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.
Sullivan	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WKPT	19	Do.
Sumner	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Tipton	WREC	3	Memphis.
	WMC	5	Do.
	WHBQ	13	Do.
Trousdale	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Unicoi	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Union	WATE	6	Knoxville.
	WBIR	10	Do.
	WTVK	26	Do.
Van Buren	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
	WRCB	3	Chattanooga.
	WDEF	12	Do.
Warren	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Washington	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WKPT	19	Do.
Wayne	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Weakley	WPSD	6	Paducah-Cape Girardeau-Harrisburg.
	KFVS	12	Do.
	WBBJ	7	Jackson, Tenn.
White	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

TENNESSEE—continued

County	Call letters, channel number, and market name		
Williamson	WSM	4	Nashville.
	WLAC	5	Do.
	WSIX	8	Do.
Wilson	WSM	4	Do.
	WLAC	5	Do.
	WSIX	8	Do.

TEXAS

County	Call letters, channel number, and market name		
Anderson	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Andrews	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Angelina	KTRE	9	Tyler.
Aransas	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Archer	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Armstrong	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Atascosa	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Austin	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Bailey	KCBD	11	Lubbock.
	KLBK	13	Do.
	KFDA	10	Amarillo.
Bandera	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Bastrop	KTBC	7	Austin, Tex.
	KHFI	42	Do.
	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Baylor	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Bee	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Bell	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KTBC	7	Austin, Tex.
Bexar	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KWEX	41	Do.
Blanco	WOAI	4	Do.
	KENS	5	Do.
	KSAT	12	Do.
	KTBC	7	Austin, Tex.
	KHFI	42	Do.
Borden	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Bosque	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

TEXAS—continued

County	Call letters, channel number, and market name		
Bowie	KTBS	3	Shreveport-Texarkana
	KTAL	6	Do.
	KSLA	12	Do.
Brazoria	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Brazos	KBTX	3	Waco-Temple.
	KCEN	6	Do.
	KTVT	11	Dallas-Fort Worth.
Brewster	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
	KTSM	9	El Paso.
Briscoe	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Brooks	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Brown	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KTVT	11	Dallas-Fort Worth.
Burleson	KBTX	3	Waco-Temple.
	KCEN	6	Do.
	KTBC	7	Austin, Tex.
Burnet	KTBC	7	Do.
	KHFI	42	Do.
	KWTX	10	Waco-Temple.
Caldwell	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KTBC	7	Austin, Tex.
	KHFI	42	Do.
Calhoun	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Callahan	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
Cameron	KGBT	4	McAllen-Brownsville.
	KRGV	5	Do.
Camp	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KLTV	7	Tyler.
Carson	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Cass	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Castro	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
	KLBK	13	Lubbock.
Chambers	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Cherokee	KLTV	7	Tyler.
	KTRE	9	Do.
	KTBS	3	Shreveport-Texarkana.
Childress	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

TEXAS—continued

County	Call letters, channel number, and market name		
Clay	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Cochran	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Coke	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KCTV	8	San Angelo.
Coleman	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
Collin	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Collingsworth	KVII	7	Amarillo.
	KFDA	10	Do.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Colorado	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
Comal	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Comanche	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KRBC	9	Abilene-Sweetwater.
Concho	Over 90 percent cable penetration.		
Cooke	KDFW	4	Dallas Fort Worth
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Coryell	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KTBC	7	Austin, Tex.
	KTVT	11	Dallas-Fort Worth.
Cottle	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Crane	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Crockett	KMID	2	Do.
	KOSA	7	Do.
	KMOM	9	Do.
	KCTV	8	San Angelo.
Crosby	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Culberson	KROD	4	El Paso.
	KTSM	9	Do.
	KELP	13	Do.
Dallam	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Dallas	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Dawson	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KMXN	34	Do.
	KMID	2	Odessa-Midland.
Deaf Smith	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Delta	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Denton	KDFW	4	Do.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
De Witt	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Dickens	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KTXS	12	Abilene-Sweetwater.
Dimmit	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KGNS	8	Laredo.
Donley	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Duval	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Eastland	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
Ector	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
	KTVT	11	Dallas-Fort Worth.
	KDTV	39	Do.
Edwards	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Ellis	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
El Paso	KROD	4	El Paso.
	KTSM	9	Do.
	KELP	13	Do.
Erath	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Falls	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Fannin	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KXII	12	Ardmore-Ada.
Fayette	KTBC	7	Austin, Tex.
	KHFI	42	Do.
	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Fisher	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KTVT	11	Dallas-Fort Worth.
Floyd	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Foard	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Fort Bend	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
TEXAS—continued			
Franklin	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Freestone	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Frio	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Gaines	KCBD	11	Lubbock.
	KLBK	13	Do.
	WFAA	8	Dallas-Fort Worth.
	KTVT	11	Do.
	KDTV	39	Do.
Galveston	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Garza	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KXMN	34	Do.
	KTVT	11	Dallas-Fort Worth
Gillespie	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KTBC	7	Austin, Tex.
Glasscock	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Goliad	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Gonzales	WOAI	4	Do.
	KENS	5	Do.
	KSAT	12	Do.
Gray	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Grayson	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KXII	12	Ardmore-Ada.
Gregg	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KLTV	7	Tyler.
Grimes	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
	KBTX	3	Waco-Temple.
Guadalupe	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Hale	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KTVT	11	Dallas-Fort Worth.
Hall	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Hamilton	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Hansford	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Hardeman	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Hardin	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Harris	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Harrison	KTBS	3	Shreveport-Texarkana
	KTAL	6	Do.
	KSLA	12	Do.
Hartley	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Haskell	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KFDX	3	Wichita Falls-Lawton.
Hays	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KTBC	7	Austin, Tex.
Hemphill	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Henderson	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Hidalgo	KGBT	4	McAllen-Brownsville. (Lower Rio Grande).
	KRGV	5	Do.
Hill	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KWTX	10	Waco-Temple.
Hockley	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KTVT	11	Dallas-Fort Worth.
Hood	KDFW	4	Do.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Hopkins	KDFW	4	Do.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Houston	KTRE	9	Lufkin-Nacogdoches.
	KBTX	3	Waco-Temple.
Howard	KMID	2	Odessa-Midland.
	KWAB	4	Do.
	KOSA	7	Do.
	KMOM	9	Do.
Hudspeth	KROD	4	El Paso.
	KTSM	9	Do.
	KELP	13	Do.
Hunt	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Hutchinson	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Irion	KCTV	8	San Angelo.
	KRBC	9	Abilene-Sweetwater.
Jack	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KWSO	7	Do.
	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	TEXAS—continued		
Jackson	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Jasper	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Jeff Davis	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Jefferson North	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Jefferson South	KJAC	4	Do.
	KFD	6	Do.
	KBMT	12	Do.
Jim Hogg	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Jim Wells	KIII	3	Do.
	KRIS	6	Do.
	KZTV	10	Do.
Johnson	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Jones	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
Karnes	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Kaufman	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Kendall	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Kenedy	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Kent	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KTXS	12	Abilene-Sweetwater.
Kerr	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Kimble	WOAI	4	Do.
	KENS	5	Do.
	KSAT	12	Do.
King	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	KTXS	12	Abilene-Sweetwater.
Kinney	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Kleberg	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Knox	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	KTXS	12	Abilene-Sweetwater.
Lamar	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KXII	12	Ardmore-Ada.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	TEXAS—continued		
Lamb	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSFL	28	Do.
Lampasas	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KTBC	7	Austin, Tex.
La Salle	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KGNS	8	Laredo.
Lavaca	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KPRC	2	Houston.
Lee	KTBC	7	Austin, Tex.
	KHFI	42	Do.
	KBTX	3	Waco-Temple.
	KCEN	6	Do.
Leon	KBTX	3	Do.
	KCEN	6	Do.
	KWTX	10	Do.
Liberty	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Limestone	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Lipscomb	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Live Oak	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Llano	KTBC	7	Austin, Tex.
	KHFI	42	Do.
Loving	KOSA	7	Odessa-Midland.
	KMOM	9	Do.
Lubbock	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
Lynn	KCBD	11	Do.
	KLBK	13	Do.
	KSEL	28	Do.
	KMXN	34	Do.
McCulloch	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KTBC	7	Austin, Tex.
	KHFI	42	Do.
	WFAA	8	Dallas-Fort Worth.
	KCTV	8	San Angelo.
McLennan	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KDFW	4	Dallas-Fort Worth.
	WFAA	8	Do.
	KTVT	11	Do.
McMullen	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Madison	KBTX	3	Waco-Temple.
	KPRC	2	Houston.
Marion	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Martin	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Mason	KTBC	7	Austin, Tex.
	KHFI	42	Do.
	KENS	5	San Antonio.
	KSAT	12	Do.
Matagorda	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	TEXAS—continued		
Maverick	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Medina	WOAI	4	Do.
	KENS	5	Do.
	KSAT	12	Do.
Menard	KRBC	9	Abilene-Sweetwater.
	KCTV	8	San Angelo.
Midland	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Milam	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KTBC	7	Austin, Tex.
Mills	KCEN	6	Waco-Temple.
	KWTX	10	Do.
	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
Mitchell	KMID	2	Odessa-Midland.
	KMOM	9	Do.
	KTXS	12	Abilene-Sweetwater.
Montague	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Montgomery	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Moore	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Morris	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Motley	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSEL	28	Do.
	KGNC	4	Amarillo.
	KVII	7	Do.
Nacogdoches	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
	KTVT	11	Dallas-Fort Worth.
	KTRE	9	Tyler.
Navarro	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Newton	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Nolan	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
Nueces	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Ochiltree	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Oldham	KGNC	4	Do.
	KVII	7	Do.
	KFDA	10	Do.
Orange	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Palo Pinto	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	TEXAS—continued		
Panola	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Parker	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Parmer	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
	KCDB	11	Lubbock.
Pecos	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Polk	KTRE	9	Tyler.
	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KPRC	2	Houston.
Potter	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Presidio	KOSA	7	Odessa-Midland.
Rains	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Randall	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Reagan	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Real	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Red River	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Reeves	KOSA	7	Odessa-Midland.
	KMOM	9	Do.
Refugio	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
Roberts	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Robertson	KBTX	3	Waco-Temple.
	KCEN	6	Do.
	KWTX	10	Do.
	KTBC	7	Austin, Tex.
Rockwall	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Runnels	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
	KCTV	8	San Angelo.
Rusk	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KLTV	7	Tyler.
Sabine	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
	KTRE	9	Tyler.
San Augustine	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
	KTRE	9	Tyler.
San Jacinto	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
TEXAS—continued			
San Patricio	KIII	3	Corpus Christi.
	KRIS	6	Do.
	KZTV	10	Do.
San Saba	KDFW	4	Dallas-Fort Worth.
	KRBC	9	Abilene-Sweetwater.
	KTBC	7	Austin, Tex.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Schleicher	KCTV	8	San Angelo.
	KRBC	9	Abilene-Sweetwater.
Scurry	KRBC	9	Do.
	KTXS	12	Do.
Shackelford	KRBC	9	Do.
	KTXS	12	Do.
Shelby	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Sherman	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Smith	KLTV	7	Tyler.
	KDFW	4	Dallas-Fort Worth.
	KTVT	11	Do.
	KTBS	3	Shreveport-Texarkana.
	KSLA	12	Do.
Somervell	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
Starr	KGBT	4	McAllen-Brownsville. (Lower Rio Grande).
	KRGV	5	Do.
Stephens	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
	WFAA	8	Dallas-Fort Worth.
	KTVT	11	Do.
Sterling	KRBC	9	Abilene-Sweetwater.
	KCTV	8	San Angelo.
Stonewall	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
Sutton	WOAI	4	San Antonio.
	KSAT	12	Do.
	KCTV	8	San Angelo.
Swisher	KGNC	4	Amarillo.
	KVII	7	Do.
	KFDA	10	Do.
Tarrant	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.
Taylor	KRBC	9	Abilene-Sweetwater.
	KTXS	12	Do.
Terrell	Over 90 percent cable penetration.		
Terry	KCBD	11	Lubbock.
	KLBK	13	Do.
	KSFL	28	Do.
	KTVT	11	Dallas-Fort Worth.
Throckmorton	KFDX	3	Wichitia Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Titus	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
Tom Green	KCTV	8	San Angelo.
	KRBC	9	Abilene-Sweetwater.
Travis	KTBC	7	Austin, Tex.
	KHFI	42	Do.
Trinity	KRTE	9	Tyler.
	KPRC	2	Houston.
	KBTX	3	Waco-Temple.
Tyler	KJAC	4	Beaumont-Port Arthur.
	KFDM	6	Do.
	KBMT	12	Do.
Upshur	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KLTV	7	Tyler.
Upton	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Uvalde	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
Val Verde	WOAI	4	Do.
	KENS	5	Do.
Van Zandt	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Victoria	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KIII	3	Corpus Christi.
Walker	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
	KBTX	3	Waco-Temple.
Waller	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
Ward	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Washington	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Do.
	KHTV	39	Do.
	KBTX	3	Waco-Temple.
Webb	KGNS	8	Laredo.
	XEFE	2	Mexico.
Wharton	KPRC	2	Houston.
	KHOU	11	Do.
	KTRK	13	Dc.
	KHTV	39	Do.
Wheeler	KFDA	10	Amarillo.
Wichita	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Wilbarger	KFDX	3	Do.
	KAUZ	6	Do.
	KSWO	7	Do.
Willacy	KGBT	4	McAllen-Brownsville. (Lower Rio Grande).
	KRGV	5	Do.
Williamson	KTBC	7	Austin, Tex.
	KHFI	42	Do.
	KCEN	6	Waco-Temple.
	KWTX	10	Do.
Wilson	WOAI	4	San Antonio.
	KENS	5	Do.
	KSAT	12	Do.
	KWEX	41	Do.
Winkler	KMID	2	Odessa-Midland.
	KOSA	7	Do.
	KMOM	9	Do.
Wise	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KDTV	39	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

TEXAS—continued

County	Call letters, channel number, and market name		
Wood	KTBS	3	Shreveport-Texarkana.
	KTAL	6	Do.
	KSLA	12	Do.
	KDFW	4	Dallas-Fort Worth.
	WBAP	5	Do.
	WFAA	8	Do.
	KTVT	11	Do.
	KLTV	7	Tyler.
Yoakum	KCBD	11	Lubbock.
	KLBK	13	Do.
	KBIM	10	Roswell.
Young	KFDX	3	Wichita Falls-Lawton.
	KAUZ	6	Do.
	KSWO	7	Do.
Zapata	KGNS	8	Laredo.
	KGBT	4	Mc Allen-Brownsville. (Lower Rio Grande).
	XEFB	3	Mexico.
Zavala	WOAI	4	San Antonio.
	KENS	5	Do.

Census county divisions in split counties:
Jefferson North: Beaumont, Nome-China.
Jefferson South: all other.

UTAH

County	Call letters, channel number, and market name		
Beaver	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Box Elder	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Cache	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Carbon	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Daggett	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Davis	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Duchesne	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Emery	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Garfield	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Grand	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Iron	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Juab	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Kane	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Millard	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Morgan	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

UTAH—continued

County	Call letters, channel number, and market name		
Piute	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Rich	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Salt Lake	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
San Juan	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Sanpete	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Sevier	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Summit	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Tooele	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Uintah	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Utah	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Wasatch	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Washington	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
	KORK	3	Do.
Wayne	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.
Weber	KUTV	2	Do.
	KCPX	4	Do.
	KSL	5	Do.

VERMONT

County	Call letters, channel number, and market name		
Addison	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WRGB	6	Albany-Schenectady-Troy.
Bennington	WRGB	6	Do.
	WTEN	10	Do.
	WAST	13	Do.
Caledonia	WCAX	3	Burlington-Plattsburgh.
	WMTW	8	Portland-Poland Spring.
Chittenden	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	CFCF	12	Canada.
Essex	WCAX	3	Burlington-Plattsburgh.
	WMTW	8	Portland-Poland Spring.
Franklin	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	CBMT	6	Canada.
	CFCF	12	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
VERMONT—continued			
Grand Isle	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	CBMT	6	Canada.
	CFCF	12	Do.
Lamoille	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WVNY	22	Do.
	WMTW	8	Portland-Poland Spring.
	CBMT	6	Canada.
Orange	WCAX	3	Burlington-Plattsburgh.
	WMTW	8	Portland-Poland Spring.
Orleans	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WMTW	8	Portland-Poland Spring.
	CBMT	6	Canada.
	CFCF	12	Do.
Rutland	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WRGB	6	Albany-Schenectady-Troy.
	WTEN	10	Do.
	WAST	13	Do.
Washington	WCAX	3	Burlington-Plattsburgh.
	WPTZ	5	Do.
	WMTW	8	Portland-Poland Spring.
Windham	WMTW	8	Do.
	WHDH	5	Boston.
Windsor	WCAX	3	Burlington-Plattsburgh.
	WMTW	8	Portland-Poland Spring.
VIRGINIA			
Accomack	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WBOC	16	Salisbury.
	WTTG	5	Washington, D.C.
Albemarle and Charlottesville City.	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WSVA	3	Harrisonburg.
Allegheny and Covington City including Clifton Forge City.	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Amelia	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Amherst	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Appomattox	WDBJ	7	Do.
	WSLS	10	Do.
	WLVA	13	Do.
VIRGINIA—continued			
Arlington and Alexandria City.	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Augusta and Stronton City and Waynesboro City.	WTVR	6	Richmond.
	WWBT	12	Do.
	WSVA	3	Harrisonburg.
	WTTG	5	Washington, D.C.
Bath	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
	WSVA	3	Harrisonburg.
Bedford	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Bland	WHIS	6	Bluefield-Beckley-Oak Hill.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Botetourt	WDBJ	7	Do.
	WSLS	10	Do.
	WLVA	13	Do.
Campbell and Lynchburg City.	WDBJ	7	Do.
	WSLS	10	Do.
	WLVA	13	Do.
Buchanan	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WCYB	5	Bristol-Kingsport-Johnson City.
Buckingham	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Caroline	WTVR	6	Do.
	WXEY	8	Do.
	WWBT	12	Do.
	WTTG	5	Washingtom, D.C.
Brunswick	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Carroll	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Charlotte	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
	WTVR	6	Richmond.
Charles City	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Chesterfield and Colonial Heights City.	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Clarke	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Craig	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Culpeper	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	VIRGINIA—continued		
Cumberland	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Dickenson	WCYB	5	Bristol-Kingsport-Johnson City.
Dinwiddie and Petersburg City.	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Essex	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WTTG	5	Washington, D.C.
Fairfax and Fairfax City and Falls Church City.	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Fauquier	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
Floyd	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Fluvanna	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Franklin	WDBJ		Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Frederick and Winchester City.	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Giles	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Glouster	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.
Goochland	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Grayson	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Greene	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WSVA	3	Harrisonburg.
Greensville	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
Halifax	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Hanover	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Henrico and Richmond City.	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Henry and Martinsville City.	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WFMY	2	Greensboro-Winston-Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Highland	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WSVA	3	Harrisonburg.
Isle of Wight	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
James City and Williamsburg City.	WTAR	3	Do.
	WAVY	10	Do.
	WVEC	13	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
King and Queen	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WAVY	10	Norfolk-Portsmouth-Newport News-Hampton.
King George	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
King William	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Lancaster	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
Lee	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WATE	6	Knoxville.
	WBIR	10	Do.
Loudoun	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Louisa	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Lunenburg	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Madison	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WSVA	3	Harrisonburg.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
Mathews	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
VIRGINIA—continued			
Mecklenburg	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
	WRAL	5	Raleigh-Durham.
	WTVD	11	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.
Middlesex	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	13	Do.
Montgomery and Radford City.	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
Nansemond and Suffolk City.	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
	WYAH	27	Do.
Nelson	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
	WTVR	6	Richmond.
	WWBT	12	Do.
New Kent	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
Norfolk and Chesapeake City and Portsmouth City and Norfolk City.	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Northampton	WTAR	3	Do.
	WAVY	10	Do.
	WVEC	13	Do.
Northumberland	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WTTG	5	Washington, D.C.
Nottoway	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Orange	WTVR	6	Do.
	WXEX	8	Do.
	WWBT	12	Do.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
Page	WRC	4	Do.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WSVA	3	Harrisonburg.
	WTVR	6	Richmond.
Patrick	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Pittsylvania and Danville City.	WDBJ	7	Do.
	WSLS	10	Do.
	WLVA	13	Do.
	WFMY	2	Greensboro-Winston Salem-High Point.
	WGHP	8	Do.
	WSJS	12	Do.
Powhatan	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Prince Edward	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WLVA	13	Roanoke-Lynchburg.
Prince George and Hopewell City.	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
Prince William	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
Pulaski	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Rappahannock	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WSVA	3	Harrisonburg.
Richmond	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTTG	5	Washington, D.C.
Roanoke and Roanoke City and Salem City.	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WLVA	13	Do.
	WRFT	27	Do.
Rockbridge	WDBJ	7	Do.
	WSLS	10	Do.
	WLVA	13	Do.
Rockingham and Harrisonburg City.	WSVA	3	Harrisonburg.
	WTVR	6	Richmond.
	WWBT	12	Do.
	WTTG	5	Washington, D.C.
Russell	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Scott	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Shenandoah	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WSVA	3	Harrisonburg.
Smyth	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Southampton	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Spotsylvania and Fredericksburg City.	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WTVR	6	Richmond.
Stafford	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WDCA	20	Do.
	WTVR	6	Richmond.

SIGNIFICANTLY VIEWED SIGNALS—Continued

VIRGINIA—continued

County	Call letters, channel number, and market name		
Surry	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Sussex	WTVR	6	Richmond.
	WXEX	8	Do.
	WWBT	12	Do.
	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
Tazewell	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WDBJ	7	Roanoke-Lynchburg.
Virginia Beach and Virginia Beach City.	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
Warren	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WBAL	11	Do.
	WJZ	13	Do.
	WSVA	3	Harrisonburg.
Washington and Bristol City.	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
	WKPT	19	Do.
	WLOS	13	Greenville-Spartanburg-Asheville.
Westmoreland	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WTVR	6	Richmond.
	WXEX	8	Do.
Wise	WCYB	5	Bristol-Kingsport-Johnson City.
	WJHL	11	Do.
Wythe	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Hampton-Newport News and Hampton City and Newport News City.	WTAR	3	Norfolk-Portsmouth-Newport News-Hampton.
	WAVY	10	Do.
	WVEC	13	Do.
York	WTAR	3	Do.
	WAVY	10	Do.
	WVEC	13	Do.

WASHINGTON

County	Call letters, channel number, and market name		
Adams	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KEPR	19	Yakima.
	KNDU	25	Do.
Asotin	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
	KLEW	3	Yakima.
Benton	KEPR	19	Do.
	KNDU	25	Do.
	KVEW	42	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

WASHINGTON—continued

County	Call letters, channel number, and market name		
Chelan	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Clallam	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KVOS	12	Bellingham.
	CBUT	2	Canada.
	CHEK	6	Do.
	CHAN	8	Do.
Clark	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Columbia	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Cowlitz	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Douglas	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Ferry	KREM	2	Do.
	KXLY	4	Do.
	KHQ	6	Do.
Franklin	KEPR	19	Yakima.
	KNDU	25	Do.
	KVEW	42	Do.
Garfield	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Grant	KREM	2	Do.
	KXLY	4	Do.
	KHQ	6	Do.
Grays Harbor	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
Island	KOMO	4	Do.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
	KVOS	12	Bellingham.
	CHEK	6	Canada.
Jefferson	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
King	KOMO	4	Do.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
Kitsap	KOMO	4	Do.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
Kittitas	KNDO	23	Yakima.
	KIMA	29	Do.
Klickitat	KATU	2	Portland. Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Lewis	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
	KATU	2	Portland. Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Lincoln	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Mason	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
		WASHINGTON—continued	
Okanogan	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Pacific	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
Pend Oreille	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Pierce	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
San Juan	KOMO	4	Do.
	KING	5	Do.
	KIRO	7	Do.
	KVOS	12	Bellingham.
	CBUT	2	Canada.
	CHEK	6	Do.
	CHAN	8	Do.
Skagit	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
	KVOS	12	Bellingham.
	CHEK	6	Canada.
	CHAN	8	Do.
Skamania	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KGW	8	Do.
	KPTV	12	Do.
Snohomish	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
Spokane	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Stevens	KREM	2	Do.
	KXLY	4	Do.
	KHQ	6	Do.
Thurston	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	KTNT	11	Do.
	KTVW	13	Do.
Wahkiakum	KATU	2	Portland, Oreg.
	KOIN	6	Do.
	KPTV	12	Do.
Walla Walla	KEPR	19	Yakima.
	KNDU	25	Do.
	KVEW	42	Do.
	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Whatcom	KVOS	12	Bellingham.
	KOMO	4	Seattle-Tacoma.
	KING	5	Do.
	KIRO	7	Do.
	CBUT	2	Canada.
	CHEK	6	Do.
	CHAN	8	Do.
Whitman	KREM	2	Spokane.
	KXLY	4	Do.
	KHQ	6	Do.
Yakima	KNDO	23	Yakima.
	KIMA	29	Do.
	KAPP	35	Do.
		WEST VIRGINIA	
Barbour	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
		WEST VIRGINIA—continued	
Berkeley	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
Boone	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Braxton	WSAZ	3	Do.
	WCHS	8	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
	WDTV	5	Clarksburg-Weston.
Brooke	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Cabell	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Calhoun	WSAZ	3	Do.
	WCHS	8	Do.
	WHTN	13	Do.
	WDTV	5	Clarksburg-Weston.
Clay	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
Doddridge	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do
Fayette	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Gilmer	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
	WSAZ	3	Charleston-Huntington.
Grant	WSVA	3	Harrisonburg.
	WJAC	6	Johnstown-Altoona.
Greenbrier	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Hampshire	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WSVA	3	Harrisonburg.
	WJAC	6	Johnstown-Altoona.
Hancock	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Hardy	WSVA	3	Harrisonburg.
	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WTOP	9	Do.
Harrison	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WTAE	4	Pittsburgh.
Jackson	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
	WEST VIRGINIA—continued		
Jefferson	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
Kanawha	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Lewis	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
Lincoln	WSAZ	3	Charleston-Huntington.
	WHTN	13	Do.
	WCHS	8	Do.
Logan	WSAZ	3	Do.
	WCHS	8	Do.
	WHTN	13	Do.
Marion	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
McDowell	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
Marshall	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
Mason	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Mercer	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Mineral. Over 90 % cable penetration.			
Mingo	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Monongalia	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WBOY	12	Clarksburg-Weston.
	WTRF	7	Wheeling-Steubenville.
Monroe	WHIS	6	Bluefield-Beckley-Oak Hill.
	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
Morgan	WRC	4	Washington, D.C.
	WTTG	5	Do.
	WMAL	7	Do.
	WTOP	9	Do.
	WMAR	2	Baltimore.
	WFBG	10	Johnstown-Altoona.
Nicholas	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
Ohio	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WIIC	11	Do.
	WPGH	53	Do.
Pendelton	WSVA	3	Harrisonburg.
Pleasants	WTRF	7	Wheeling-Steubenville.
	WCHS	8	Charleston-Huntington.
	WDTV	5	Clarksburg-Weston.
Pocahontas	WDBJ	7	Roanoke-Lynchburg.
	WSLS	10	Do.
	WHIS	6	Bluefield-Beckley-Oak Hill.
Preston	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WHC	11	Do.
	WDTV	5	Clarksburg-Weston.
	WTRF	7	Wheeling-Steubenville.
Putnam	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Raleigh	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Randolph	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WCHS	8	Charleston-Huntington.
Ritchie	WSAZ	3	Do.
	WCHS	8	Do.
	WHTN	13	Do.
	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WTRF	7	Wheeling-Steubenville.
Roane	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Summers	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
Taylor	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
Tucker	KDKA	2	Pittsburgh.
	WTAE	4	Do.
	WDTV	5	Clarksburg-Weston.
	WBOY	12	Do.
	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
Tyler	WTRF	7	Do.
	WDTV	5	Clarksburg-Weston.
Upshur	WDTV	5	Do.
	WBOY	12	Do.
Wayne	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
Webster	WSAZ	3	Do.
	WOAY	4	Bluefield-Beckley-Oak Hill.
	WDTV	5	Clarksburg-Weston.
Wetzel	WTRF	7	Wheeling-Steubenville.
	WSTV	9	Do.
	KDKA	2	Pittsburgh.
	WTAE	4	Do.
Wirt	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
WEST VIRGINIA—continued			
Wood	WSAZ	3	Charleston-Huntington.
	WCHS	8	Do.
	WHTN	13	Do.
	WTAP	15	Parkersburg.
Wyoming	WOAY	4	Bluefield-Beckley-Oak Hill.
	WHIS	6	Do.
	WCHS	8	Charleston-Huntington.
WISCONSIN			
Adams	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WKBT	8	La Crosse-Eau Claire.
	WFAU	13	Do.
	WISC	3	Madison.
Ashland	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
Barron	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	WEAU	13	La Crosse-Eau Claire.
Bayfield	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
Brown	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Buffalo	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	KROC	10	Rochester-Mason City-Austin.
Burnett	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
Calumet	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Chippewa	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Clark	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Columbia	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Crawford	WKBT	8	La Crosse-Eau Claire.
	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
Dane	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Dodge	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Door	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Douglas	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
WISCONSIN—continued			
Dunn	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Eau Claire	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Florence	WLUC	6	Marquette.
	WFRV	5	Green Bay.
	WAEO	12	Wausau-Rhinelander.
Fond Du Lac	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
	KFIZ	34	Fond Du Lac.
	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
Forest	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
	WASU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
Grant	WMT	2	Cedar Rapids-Waterloo.
	KWWL	7	Do.
	KCRG	9	Do.
	WISC	3	Madison.
Green	WISC	3	Do.
	WMTV	15	Do.
	WKOW	27	Do.
	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
Green Lake	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
	WISC	3	Madison.
Iowa	WISC	3	Do.
	WMTV	15	Do.
	WKOW	27	Do.
Iron	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
Jackson	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Jefferson	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Juneau	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WISC	3	Madison.
	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
Kenosha	WBBM	2	Chicago.
	WMAQ	5	Do.
	WLS	7	Do.
	WGN	9	Do.
	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
Kewaunee	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
La Crosse	WKPT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WXOW	19	Do.
Lafayette	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
WISCONSIN—continued			
Langlade	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Lincoln	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
Manitowoc	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Marathon	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
	WEAU	13	La Crosse-Eau Claire.
Marinette	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Marquette	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Menominee	WBAY	2	Do.
	WFRV	5	Do.
	WLUK	11	Do.
Milwaukee	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
Monroe	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
Oconto	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUX	11	Do.
Oneida	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
Outagamie	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Ozaukee	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
Pepin	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Pierce	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Polk	WCCO	4	Do.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Portage	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Price	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
	WEAU	13	La Crosse-Eau Claire.
Racine	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
	WLS	7	Chicago.
	WGN	9	Do.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	Call letters, channel number, and market name		
WISCONSIN—continued			
Richland	WISC	3	Madison.
	WKBT	8	La Crosse-Eau Claire.
Rock	WREX	13	Rockford.
	WTVO	17	Do.
	WCEE	23	Do.
	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Rusk	WKBT	8	La Crosse-Eau Claire.
	WEAU	13	Do.
	WSAU	7	Wausau-Rhinelander.
St Croix	WCCO	4	Minneapolis-St. Paul.
	KSTP	5	Do.
	KMSP	9	Do.
	WTCN	11	Do.
Sauk	WISC	3	Madison.
	WMTV	15	Do.
	WKOW	27	Do.
Sawyer	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
Shawano	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
	WSAU	7	Wausau-Rhinelander.
Sheboygan	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
Taylor	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WEAU	13	La Crosse-Eau Claire.
Trempealeau	WKBT	8	Do.
	WEAU	13	Do.
Vernon	WKBT	8	Do.
	WEAU	13	Do.
	KROC	10	Rochester-Mason City-Austin.
Vilas	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WAEO	12	Do.
Walworth	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WBBM	2	Chicago.
	WGN	9	Do.
	WISC	3	Madison.
	WREX	13	Rockford.
Washburn	KDAL	3	Duluth-Superior.
	WDSM	6	Do.
	WDIO	10	Do.
Washington	WTMJ	4	Milwaukee.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
Waukesha	WTMJ	4	Do.
	WITI	6	Do.
	WISN	12	Do.
	WVTV	18	Do.
Waupaca	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
	WSAU	7	Wausau-Rhinelander.
Waushara	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
	WSAU	7	Wausau-Rhinelander.
Winnebago	WBAY	2	Green Bay.
	WFRV	5	Do.
	WLUK	11	Do.
	KFIZ	34	Fond Du Lac.

SIGNIFICANTLY VIEWED SIGNALS—Continued

County	*Call letters, channel number, and market name*		
	WISCONSIN—continued		
Wood	WSAU	7	Wausau-Rhinelander.
	WAOW	9	Do.
	WEAU	13	La Crosse-Eau Claire.
Albany	KOA	4	Denver.
	KLZ	7	Do.
	KBTV	9	Do.
	KFBC	5	Cheyenne.
Big Horn	KOOK	2	Billings.
	KULR	8	Do.
	KWRB	10	Casper-Riverton.
Campbell	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
	KTWO	2	Casper-Riverton.
	KOTA	3	Rapid City.
Carbon	KTWO	2	Casper-Riverton.
	KFBC	5	Cheyenne.
Converse	KTWO	2	Casper-Riverton.
	KSTF	10	Cheyenne.
Crook	KOTA	3	Rapid City.
	KTWO	2	Casper-Riverton.
Fremont	KTWO	2	Do.
	KWRB	10	Do.
Goshen	KSTF	10	Cheyenne.
	KDUH	4	Rapid City.
Hot Springs	KTWO	2	Casper-Riverton.
	KWRB	10	Do.
Johnson	KTWO	2	Do.
Laramie	KFBC	5	Cheyenne.
	KWGN	2	Denver.
	KOA	4	Do.
	KLZ	7	Do.
	KBTV	9	Do.
Lincoln	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
	KCPX	4	Salt Lake City.
	KSL	5	Do.
Natrona	KTWO	2	Casper-Riverton.
Niobrara	KTWO	2	Do.
	KFBC	5	Cheyenne.
Park	KOOK	2	Billings.
	KULR	8	Do.
Platte	KFBC	5	Cheyenne.
	KSTF	10	Do.
	KTWO	2	Casper-Riverton.
Sheridan	KOOK	2	Billings.
	KULR	8	Do.
	KTWO	2	Casper-Riverton.
	KOTA	3	Rapid City.
Sublette	KTWO	2	Casper-Riverton.
	KID	3	Idaho Falls-Pocatello.
Sweetwater	Over 90 percent cable penetration.		
Teton	KID	3	Idaho Falls-Pocatello.
	KIFI	8	Do.
Uinta	KUTV	2	Salt Lake City.
	KCPX	4	Do.
	KSL	5	Do.
Washakie	KTWO	2	Casper-Riverton.
	KWRB	10	Do.
	KCPX	4	Salt Lake City.
	KSL	5	Do.
Weston	KTWO	2	Casper-Riverton.
	KOTA	3	Rapid City.
Yellowstone National Park,	KID	3	Idaho Falls-Pocatello.
	KULR	8	Billings.

APPENDIX D

CONSENSUS AGREEMENT

Local Signals:

Local signals defined as proposed by the FCC, except that the significant viewing standard to be applied to "out-of-market" independent stations in overlapping market situations would be a viewing hour share of at least 2 percent and a net weekly circulation of at least 5 percent.

Distant Signals:

No change from what the FCC has proposed.

Exclusivity for Nonnetwork Programing (against distant signals only): A series shall be treated as a unit for all exclusivity purposes.

The burden will be upon the copyright owner or upon the broadcaster to notify cable systems of the right to protection in these circumstances.

A. *Markets 1–50.*

A 12-month presale period running from the date when a program in syndication is first sold any place in the United States, plus run-of-contract exclusivity where exclusivity is written into the contract between the station and the program supplier (existing contracts will be presumed to be exclusive).

B. *Markets 51–100.*

For syndicated programing which has had no previous nonnetwork broadcast showing in the market, the following contractual exclusivity will be allowed:

(1) For off-network series, commencing with first showing until first run completed, but no longer than 1 year.

(2) For first-run syndicated series, commencing with first showing and for 2 years thereafter.

(3) For feature films and first-run, nonseries syndicated programs, commencing with availability date and for 2 years thereafter.

(4) For other programing, commencing with purchase and until day after first run, but no longer than 1 year.

Provided, however, That no exclusivity protection would be afforded against a program imported by a cable system during prime time unless the local station is running or will run that program during prime time.

Existing contracts will be presumed to be exclusive. No preclearance in these markets.

C. *Smaller Markets.*

No change in the FCC proposals.

Exclusivity for Network Programing:

The same-day exclusivity now provided for network programing would be reduced to simultaneous exclusivity (with special relief for time-zone problems) to be provided in all markets.

Leapfrogging:

A. For each of the first two signals imported, no restriction on point of origin, except that if it is taken from the top-25 markets it must be from one of the two closest such markets. Whenever a CATV system must black out programing from a distant top-25 market station signals it normally carries, it may substitute any distant signals without restriction.

B. For the third signal, the UHF priority, as set forth in the FCC's letter of August 5, 1971, p. 16.

Copyright Legislation:

A. All parties would agree to support separate CATV copyright legislation as described below, and to seek its early passage.

B. Liability to copyright, including the obligation to respect valid exclusivity agreements, will be established for all CATV carriage of all radio and television broadcast signals except carriage by independently owned systems now in existence with fewer than 3,500 subscribers. As against distant signals importable under the FCC's initial package, no greater exclusivity may be contracted for than the Commission may allow.

C. Compulsory licenses would be granted for all local signals as defined by the FCC, and additionally for those distant signals defined and authorized under the FCC's initial package and those signals grandfathered when the initial package goes into effect. The FCC would retain the power to authorize additional distant signals for CATV carriage; there would, however, be no compulsory license granted with respect to such signals, nor would the FCC be able to limit the scope of exclusivity agreements as applied to such signals beyond the limits applicable to over-the-air showings.

D. Unless a schedule of fees covering the compulsory licenses or some other payment mechanism can be agreed upon between the copyright owners and the CATV owners in time for inclusion in the new copyright statute, the legislation would simply provide for compulsory arbitration failing private agreement on copyright fees.

E. Broadcasters, as well as copyright owners, would have the right to enforce exclusivity rules through court actions for injunction and monetary relief.

Radio Carriage:

When a CATV system carries a signal from an AM or FM radio station licensed to a community beyond a 35-mile radius of the system, it must, on request, carry the signals of all local AM or FM stations, respectively.

Grandfathering:

The new requirements as to signals which may be carried are applicable only to new systems. Existing CATV systems are "grandfathered." They can thus freely expand currently offered service throughout their presently franchised areas with one exception: In the top 100 markets, if the system expands beyond discrete areas specified in FCC order (e.g., the San Diego situation), operations in the new portions must comply with the new requirements.

Grandfathering exempts from future obligation to respect copyright exclusivity agreements, but does not exempt from future liability for copyright payments.

Part 79 [Reserved]

FINDING AIDS

A list of current CFR volumes, a list of superseded CFR volumes, and a list of CFR titles, subtitles, chapters, subchapters and parts are included in the subject index volume to the Code of Federal Regulations which is published separately and revised annually.

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United States Information Agency	22, V; 41, 19
United States Postal Service	39, I
United States Soldiers' Home	5, XI
United States Tariff Commission	19, II
United States Travel Service	15, XII
Urban Mass Transportation	49, VI
Veterans Administration	38, I
Federal Procurement Regulations System	41, 8
Wage and Hour Division	29, V
Water Resources Council	18, VI
Water Resources Research, Office of	18, IV
Welfare-Pension Reports, Office of Labor-Management and	29, IV
Wildlife, Bureau of Sport Fisheries and	50, I

Redesignation Table

NOTE: For convenience, a redesignation table follows, covering all redesignations in Subchapters A, B and D, as well as in Subchapter C, of this title (28 F.R. 12386, Nov. 22, 1963).

PART 0

No change in number of part. Following sections were redesignated.

Old	*New*
0.1	0.1
0.2 (a-b)	0.2
(c)	0.181
0.3	0.3
0.5	0.5
0.10	0.71
0.11	0.73
0.12	0.72
0.13	0.74
0.14	0.75
0.15	0.76
0.16	0.77
0.17	0.78
0.18	0.79
0.19	0.80
0.20	0.81
0.21	0.91
0.22	0.92
0.23	0.93
0.24	0.94
0.25	0.95
0.26	0.96
0.27	0.97
0.28	0.98
0.29	0.99
0.41	0.111
0.42	0.113
0.43	0.112
0.44	0.113
0.45	0.114
0.46	0.115
0.47	0.116
0.49	0.121
0.61	0.131
0.62	0.133
0.63	0.132
0.64	0.133
0.65	0.134
0.66	0.135
0.67	0.136
0.68	0.137
0.69	0.138
0.70	0.139
0.81	0.151
0.82	0.152
0.91	0.11
0.92	0.12
0.93	0.14
0.94	0.15
0.95	0.16
0.96	0.17
0.97	0.19
	and 0.183
0.98	0.18
0.111	0.41
0.112	0.42
0.113	0.43
0.114	0.44
0.115	0.45
0.116	0.46
0.117	0.47
0.120	0.31
0.121	0.32
0.122	0.33
0.123	0.34
0.124	0.35
0.125	0.36
0.126	0.37
0.131	0.51
0.132	0.52
0.133	0.53
0.134	0.54
0.135	0.55
0.136	0.56
0.141	0.171
0.151	0.61
0.161	0.181
0.162	0.184
0.201	0.201
0.202	0.203
0.206	0.361
0.207	0.365
0.211	0.211
0.212	0.212(a)
0.213	0.212(b)
0.214	0.214
0.215	0.215
0.216	0.186
0.217	0.383
0.218	0.218
0.219	0.381
0.224	0.351
0.225	0.357
0.231	0.341
0.232	0.347
0.241	0.281
0.242	0.287
0.251	0.291
0.252	0.293
0.253	0.294
0.254	0.295
0.255	0.296
0.256	0.297
0.257	0.302
0.258	0.303
0.259	0.304
0.260	0.305
0.261	0.307
0.262	0.292
0.263	0.298
0.271	0.311
0.272	0.313
0.281	0.314
0.282	0.317
0.284	0.316
0.285	0.315
	and 0.385
0.286	0.386
Preceding 0.291	0.333
0.291	0.331
0.292	0.332
0.293	0.337
0.322	0.251
0.323	0.257
0.331	0.241
0.332	0.243
0.333	0.247
0.341	0.261
0.351	0.371(a)
0.361	0.231
0.401	
(a-c)	0.401
(d-e)	0.403
0.402	0.411
0.404	0.415
0.405	0.413
0.406	
(a-f)	0.417
(g)	0.419
(h)	0.421
(i)	0.425
(j)	0.423
(k)	0.417(b)(2)
(l)	0.417(c)
0.407	0.427
0.408	0.407
0.409	0.441
0.410	0.449
0.411	0.451
0.412	0.453
0.413	
(a-b)	0.443
(c)	0.445
0.414	0.447
0.415	0.405
0.416	0.429
0.417	0.431

New	*Old*
0.1	0.1
0.2	0.2 (a-b)
0.3	0.3
0.5	0.5
0.11	0.91
0.12	0.92
0.13	New
0.14	0.93
0.15	0.94
0.16	0.95
0.17	0.96
0.18	0.98
0.19	New (See 0.97)
0.20	New
0.31	0.120
0.32	0.121
0.33	0.122
0.34	0.123
0.35	0.124
0.36	0.125
0.37	0.126
0.41	0.111
0.42	0.112
0.43	0.113
0.44	0.114
0.45	0.115
0.46	0.116
0.47	0.117
0.51	0.131
0.52	0.132
0.53	0.133
0.54	0.134
0.55	0.135
0.56	0.136
0.61	0.151
0.71	0.10
0.72	0.12
0.73	0.11
0.74	0.13
0.75	0.14
0.76	0.15
0.77	0.16
0.78	0.17
0.79	0.18
0.80	0.19
0.81	0.20
0.91	0.21
0.92	0.22
0.93	0.23
0.94	0.24
0.95	0.25
0.96	0.26
0.97	0.27
0.98	0.28
0.99	0.29
0.111	0.41
0.112	0.43
0.113	0.42
	and 0.44
0.114	0.45
0.115	0.46
0.116	0.47
0.121	0.49
0.131	0.61
0.132	0.63

New	*Old*
0.133	0.62
	and 0.64
0.134	0.65
0.135	0.66
0.136	0.67
0.137	0.68
0.138	0.69
0.139	0.70
0.151	0.81
0.152	0.82
0.161	New (See 0.206)
0.171	0.141
0.181	0.2(c)
	and 0.161
0.182	0.91(d)
0.183	0.97
0.184	0.162
0.186	0.216
0.201	0.201
0.205	0.202
0.211	0.211
0.212	0.212
	and 0.213
0.214	0.214
0.215	0.215
0.218	
(a–b)	0.218
(c)	New
0.231	0.361
0.241	0.331
0.243	0.332
0.247	0.333
0.251	0.322
0.257	0.323
0.261	0.341
0.281	0.241
0.287	0.242
0.291	0.251
0.292	0.262
0.293	0.252
0.294	0.253
0.295	0.254
0.296	0.255
0.297	0.256
0.298	0.263
0.302	0.257
0.303	0.258
0.304	0.259
0.305	0.260
0.307	0.261
0.311	0.271
0.313	0.272
0.314	0.281
0.315	New (See 0.285)
0.316	0.284
0.317	0.282
0.331	0.291
0.332	0.292
0.333	Text preceding 0.291
0.337	0.293
0.341	0.231
0.347	0.232
0.351	0.224
0.357	0.225
0.361	0.206
0.365	0.207
0.371(a)	0.351
(b)	New
0.381	0.219
0.383	0.217
0.385	0.285
0.386	0.286
0.387	New
0.401	0.401 (a–c)
0.403	0.401 (d–e)
0.405	0.415
0.407	0.408
0.411	0.402
0.413	0.405
0.415	0.404
0.417	0.406 (a–f), (k–l)
0.419	0.406(g)
0.421	0.406(h)
0.423	0.406(j)
0.425	0.406(i)
0.427	0.407
0.429	0.416
0.431	0.417
0.441	0.409
0.443	0.413 (a–b)
0.445	0.413(c)
0.447	0.414
0.449	0.410
0.451	0.411
0.453	0.412

PART 1

No change in number of part. Following sections were redesignated.

Old section	*New section*
1.10	1.1
1.11	1.41
1.12	1.44
1.13	1.45
1.14	1.8
1.15	1.3
1.16	1.108
1.17	1.2
1.18	1.4
1.19	1.43
1.21	1.21
1.22	1.22
1.23	1.23
1.24	1.24
1.25	1.25
1.26	1.26
1.41	1.291
1.42	1.292
1.43	1.294
1.44	1.296
1.45	1.297
1.46	1.298
1.47	1.301
1.48	1.303
1.50	1.42
1.51	1.48
1.52	1.49
1.53	1.50
1.54	1.51
1.55	1.52
1.56	1.47
1.57	1.5
1.63	1.87
1.64	1.110
1.65	1.62
1.66	1.68
1.67	1.61
1.68	1.502
1.70	1.83
1.71	1.84
1.72	1.85
1.73	1.77(g)
1.74	1.77(d)
1.75	1.77(f)
1.76	1.89
1.77	1.91
1.78	1.92
1.79	1.6
1.80	1.80
1.81	1.101
1.82	1.102
1.83	1.104
1.84	1.106
1.85	1.115
1.86	1.117
1.87	1.113
1.101	1.201
1.102	1.202
1.103	1.219(a–b)
1.104	1.223
1.105	1.225
1.106	1.227
1.111	1.251
1.112	1.253
1.113	1.46, 1.205
1.121	1.311
1.122	1.312
1.123	1.313
1.124	1.314
1.125	1.315
1.126	1.316
1.127	1.317
1.128	1.318
1.129	1.319
1.131	1.331
1.132	1.333–1.335
1.132 (note)	1.333
	and 1.338
1.133	1.336(b)
	and 1.339
1.134(a)	1.336
(b)	1.336(b)
	and 1.337
1.135	1.340
1.140(a, c–e)	1.221
(b)	1.254
1.141	1.229
1.142	1.255
1.143	1.241
	and 1.245
1.144	1.243
1.146	1.258
1.147	1.260
1.148	1.261
1.149	1.263
1.150	1.264
1.151(a, e–f)	1.267
(b–d)	1.274
1.152(a)	1.271
(b)	1.273
1.153	1.276
1.154	1.277
1.155	1.279
1.156	1.204
1.157	1.282
1.158	1.203
1.171	1.351
1.172	1.352
1.173	1.353
1.174	1.354
1.175	1.355
1.176	1.356
1.177	1.357
1.178	1.358
1.179	1.359
1.180	1.360
1.181	1.361
1.192	1.111
1.193	1.120
1.202	1.401
1.203	1.403
1.204	1.405
1.205	1.407
1.211	1.412
1.212	1.413
1.213	1.415
1.214	1.417
1.215	1.419
1.216	1.421
1.217	1.423
1.218	1.425
1.219	1.427
1.300	1.501
1.301	1.511
1.302	1.512
1.303	1.513
1.304	1.514
1.305	1.516
1.306	1.564
1.307	1.566
1.308	1.518
1.309	1.519
1.310	1.520
1.311	1.522
1.312	1.568
1.313	1.599
1.314	1.598
1.315	1.601
1.316	1.525
1.321	1.531
1.322	1.533
1.323	1.534
1.324	1.548
1.325	1.536
1.326	1.537
1.327	1.538
1.328	1.539
1.329	1.540
1.330	1.541

Redesignation Table

Old section	*New section*
1.331	1.542
1.332	1.543
1.333	1.544
1.334	1.545
1.335	1.546
1.336	1.547
1.337	1.549
1.341	1.611
1.342	1.613
1.343	1.615
1.351	1.569
1.352	1.570
1.353	1.561
1.354	1.571
1.355	1.572
1.356	1.573
1.357	1.574
1.358	1.578
1.359	1.580
1.360	1.562
1.361(a)	1.587
(b–d)	1.591
1.362(a)	1.593
(b–h)	1.594
(i–j)	1.592
1.363	1.605
1.364	1.603
1.365	1.597
1.370	1.621
1.401	1.701
1.402	1.703
1.411	1.711
1.412	1.713
1.416	1.716
1.417	1.717
1.418	1.718
1.421	1.721
1.422	1.722
1.423	1.723
1.424	1.724
1.425	1.725
1.426	1.726
1.427	1.727
1.428	1.728
1.429	1.729
1.430	1.730
1.431	1.731
1.432	1.732
1.433	1.733
1.434	1.734
1.435	1.735
1.440	1.741
1.441	1.742
1.442	1.743
1.443	1.744
1.444	1.745
1.445	1.746
1.446	1.747
1.447	1.748
1.448	1.749
1.449	1.761
1.450	1.762
1.451	1.763
1.452	1.764
1.453	1.765
1.454	1.766
1.455	1.767
1.461	1.771
1.462	1.772
1.463	1.773
1.468	1.781
1.469	1.783
1.471	1.785
1.472	1.786
1.473	1.787
1.474	1.788
1.475	1.789
1.476	1.790
1.477	1.791
1.478	1.792
1.479	1.793
1.480	1.794
1.483	1.801
1.484	1.802
1.485	1.803
1.486	1.804
1.487	1.805
1.490	1.811
1.491	1.812
1.492	1.813
1.493	1.814
1.500	1.901
1.501	1.911
1.502	1.912
1.503	1.913
1.504	1.914
1.505	1.918
1.506	1.961
1.507	1.956
1.521	1.921
1.522	1.922
1.523	1.923
1.524	1.924
1.525	1.925
1.526	1.926
1.527	1.927
1.528	1.929
1.529	1.928
1.530	1.934
1.531	1.931
1.532	1.932
1.533	1.933
1.534	1.930
1.541	1.951
1.542	1.952
1.543	1.955
1.544	1.915
1.545	1.958
1.546	1.953
1.547	1.962
1.548	1.971
1.549	1.973
1.550	1.959
1.551	1.916
1.561	1.981
1.581	1.991
1.600	1.1101
1.601	1.1103
1.602	1.1105
1.620	1.1111
1.621	1.1113
1.622	1.1115
1.623	1.1117
1.624	1.1119
App	App.

New section	*Old section*
1.1	1.10
1.2	1.17
1.3	1.15
1.4	1.18
1.5	1.57
1.6	1.79
1.8	1.14
1.21	1.21
1.22	1.22
1.23	1.23
1.24	1.24
1.25	1.25
1.26	1.26
1.41	1.11
1.42	1.50
1.43	1.19
1.44	1.12
1.45	1.13
1.46	1.113
1.47	1.56
1.48	1.51
1.49	1.52
1.50	1.53
1.51	1.54
1.52	1.55
1.61	1.67
1.62	1.65
1.68	1.66
1.77(a–c)	New
(d)	1.74
(e)	New
(f)	1.75
(g)	1.73
(h)	New
1.80	1.80
1.81	New
1.83	1.70
1.84	1.71
1.85	1.72
1.87	1.63
1.89	1.76
1.91	1.77
1.92	1.78
1.101	1.81
1.102	1.82
1.104	1.83
1.106	1.84
1.108	1.16
1.110	1.64
1.111	1.192
1.113	1.87
1.115	1.85
1.117	1.86
1.120	1.193
1.201	1.101
1.202	1.102
1.203	1.158
1.204	1.156
1.205	1.113
1.207	New
1.221	1.103; 1.140(a c–e)
1.223	1.104
1.225	1.105
1.227	1.106
1.229	1.141
1.241	1.143
1.243	1.144
1.245	1.143(b)
1.251	1.111
1.253	1.112
1.254	1.140(b)
1.255	1.142
1.258	1.146
1.260	1.147
1.261	1.148
1.263	1.149
1.264	1.150
1.267	1.151 (a, e–f)
1.271	1.152(a)
1.273	1.152(b)
1.274	1.151 (b–d)
1.276	1.153
1.277	1.154
1.279	1.155
1.282	1.157
1.291	1.41
1.292	1.42
1.294	1.43
1.296	1.44
1.297	1.45
1.298	1.46
1.301	1.47
1.303	1.48
1.311	1.121
1.312	1.122
1.313	1.123
1.314	1.124
1.315	1.125
1.316	1.126
1.317	1.127
1.318	1.128
1.319	1.129
1.331	1.131
1.333	1.132
1.334	1.132
1.335	1.132
1.336	1.134
1.337	1.134(b)
1.338	1.132 note; 1.134(b)
1.339	1.133
1.340	1.135
1.351	1.171
1.352	1.172
1.353	1.173
1.354	1.174
1.355	1.175
1.356	1.176
1.357	1.177
1.358	1.178
1.359	1.179
1.360	1.180
1.361	1.181
1.401	1.202
1.403	1.203
1.405	1.204
1.407	1.205
1.411	New, but see 1.211
1.412	1.211
1.413	1.212
1.415	1.213
1.417	1.214
1.419	1.215

New section	*Old section*
1.421	1.216
1.423	1.217
1.425	1.218
1.427	1.219
1.501	1.300
1.502	1.68
1.511	1.301
1.512	1.302
1.513	1.303
1.514	1.304
1.516	1.305
1.518	1.308
1.519	1.309
1.520	1.310
1.522	1.311
1.525	1.316
1.531	1.321
1.533	1.322
1.534	1.323
1.536	1.325
1.537	1.326
1.538	1.327
1.539	1.328
1.540	1.329
1.541	1.330
1.542	1.331
1.543	1.332
1.544	1.333
1.545	1.334
1.546	1.335
1.547	1.336
1.548	1.324
1.549	1.337
1.561	1.353
1.562	1.360
1.564	1.306
1.566	1.307
1.568	1.312
1.569	1.351
1.570	1.352
1.571	1.354
1.572	1.355
1.573	1.356
1.574	1.357
1.578	1.358
1.580	1.359
1.587	1.361(a)
1.591	1.361 (b–d)
1.592	1.361 (1–j)
1.593	1.362(a)
1.594	1.362 (b–h)
1.597	1.365
1.598	1.314
1.599	1.313
1.601	1.315
1.603	1.364
1.605	1.363
1.611	1.341
1.613	1.342
1.615	1.343
1.621	1.370
1.701	1.401
1.703	1.402
1.711	1.411
1.713	1.412
1.716	1.416
1.717	1.417
1.718	1.418
1.721	1.421
1.722	1.422
1.723	1.423
1.724	1.424
1.725	1.425
1.726	1.426
1.727	1.427
1.728	1.428
1.729	1.429
1.730	1.430
1.731	1.431
1.732	1.432
1.733	1.433
1.734	1.434
1.735	1.435
1.741	1.440
1.742	1.441
1.743	1.442
1.744	1.443
1.745	1.444
1.746	1.445
1.747	1.446
1.748	1.447
1.749	1.448
1.761	1.449
1.762	1.450
1.763	1.451
1.764	1.452
1.765	1.453
1.766	1.454
1.767	1.455
1.771	1.461
1.772	1.462
1.773	1.463
1.781	1.468
1.783	1.469
1.785	1.471
1.786	1.472
1.787	1.473
1.788	1.474
1.789	1.475
1.790	1.476
1.791	1.477
1.792	1.478
1.793	1.479
1.794	1.480
1.801	1.483
1.802	1.484
1.803	1.485
1.804	1.486
1.805	1.487
1.811	1.490
1.812	1.491
1.813	1.492
1.814	1.493
1.901	1.500
1.911	1.501
1.912	1.502
1.913	1.503
1.914	1.504
1.915	1.544
1.916	1.551
1.918	1.505
1.921	1.521
1.922	1.522
1.923	1.523
1.924	1.524
1.925	1.525
1.926	1.526
1.927	1.527
1.928	1.529
1.929	1.528
1.930	1.534
1.931	1.531
1.932	1.532
1.933	1.533
1.934	1.530
1.951	1.541
1.952	1.542
1.953	1.546
1.955	1.543
1.956	1.507
1.958	1.545
1.959	1.550
1.961	1.506
1.962	1.547
1.971	1.548
1.973	1.549
1.981	1.561
1.991	1.581
1.1101	1.600
1.1103	1.601
1.1105	1.602
1.1111	1.620
1.1113	1.621
1.1115	1.622
1.1117	1.623
1.1119	1.624
App	App.

PART 2

No change in number of part. Following sections were redesignated.

Old	*New*
2.501	2.551
2.510	2.561
2.511	2.563
2.512	2.565
2.520	2.571
2.521	2.573
2.522	2.575
2.523	2.577
2.524	2.579
2.525	2.582
2.530	2.591
2.540(a)	2.584(b)
(b)	2.567(a), 2.584(a), 2.593(a)
(c)	2.567(b)
(d)	2.584(c)
(e)	2.584(d)
(f)	2.567(c), 2.584(e), 2.593(b)
(g)	2.567(d), 2.584(f)
2.541	2.553
2.542	2.557
2.543	2.555

New	*Old*
2.551	2.501
2.553	2.541
2.555	2.543
2.557	2.542
2.561	2.510
2.563	2.511
2.565	2.512
2.567(a)	2.540(b)
(b)	(c)
(c)	(f)
(d)	(g)
2.571	2.520
2.573	2.521
2.575	2.522
2.577	2.523
2.579	2.524
2.582	2.525
2.584(a)	2.540(b)
(b)	(a)
(c)	(d)
(d)	(e)
(e)	(f)
(f)	(g)
2.591	2.530
2.593(a)	2.540(b)
(b)	(f)

PART 3

Part 3 was redesignated as Part 73. No other change in section numbers.

PART 4

Part 4 was redesignated as Part 74. No other change in section numbers.

PART 5

No change in number of part. No change in section numbers.

Redesignation Table

PART 6

Part 6 was redesignated as Part 23. No other change in section numbers.

PART 7

Part 7 was redesignated as Part 81. No other change in section numbers.

PART 8

Part 8 was redesignated as Part 83. No other change in section numbers,

PART 9

Part 9 was redesignated as Part 87. The following sections were redesignated:

Part 9	*Part 87*
9.1	87.1
9.2	87.3
9.3	87.5
9.4	87.51
9.5	87.53
9.101	87.21
9.102	87.23
9.103	87.25
9.104	87.27
9.105	87.29
9.106	87.31
9.107	87.125
9.108	87.41
9.109	87.39
9.110	87.43
9.111	87.45
9.112	87.47
9.113	87.49
9.117	87.37
9.118	87.95
9.119	87.97
9.120	87.127
9.121	87.129
9.141	87.91
9.142	87.93
9.151	87.99
9.152	87.10
9.153	87.103
9.154	87.105
9.155	87.107
9.156	87.109
9.178	87.61
9.179	87.63
9.180	87.65
9.181	87.67
9.182	87.69
9.183	87.71
9.184	87.73
9.185	87.75
9.186	87.111
9.187	87.77
9.188	87.79
9.189	87.113
9.190	87.81
9.191	87.115
9.192	87.117
9.193	87.123
9.194	87.119
9.195	87.121
9.311	87.181
9.312	87.183
9.313	87.185
9.314	87.187
9.315	87.183(d)
9.321	87.195
9.331	87.201
9.411	87.401
9.412	87.403
9.413	87.405
9.414	87.407
9.415	87.409
9.416	87.411
9.431	87.291
9.432	87.293
9.433	87.295
9.434	87.297
9.435	87.299
9.436	87.301
9.437	87.303
9.438	87.305
9.439	87.307
9.440	87.309
9.441	87.451
9.442	87.453
9.443	87.455
9.446	87.461
9.447	87.463
9.451	87.431
9.452	87.433
9.453	87.435
9.454	87.437
9.511	87.501
9.512	87.503
9.513	87.505
9.611	87.331
9.612	87.333
9.613	87.335
9.614	87.337
9.711	87.341
9.712	87.343
9.713	87.345
9.714	87.347
9.715	87.349
9.716	87.351
9.717	87.353
9.718	87.355
9.719	87.357
9.811	87.235
9.812	87.237
9.813	87.239
9.814	87.241
9.815	87.243
9.911	87.511
9.912	87.513
9.913	87.515
9.914	87.517
9.1001	87.251
9.1002	87.253
9.1003	87.255
9.1004	87.257
9.1005	87.259
9.1101	87.321
9.1102	87.323
9.1103	87.325
9.1104	87.327
9.1105	87.329
9.1201	87.161
9.1202	87.163
9.1203	87.165
9.1204	87.167
9.1205	87.169
9.1301	87.441
9.1302	87.443
9.1401	87.141
9.1402	87.143
9.1403	87.145
9.1404	87.147
9.1405	87.149
9.1406	87.151
9.1407	87.153
9.1501	87.271
9.1502	87.273
9.1503	87.275
9.1504	87.277

PART 10

Part 10 was redesignated as Part 89. The following sections were redesignated:

Old	*New*
Subpart A—Gen. Info.	No change
10.1	89.1
10.2	89.3
10.3	89.5
10.4	98.7
10.5	89.9
10.6	89.11
10.7	89.13
10.8	89.15
10.9	89.17
Subpart B—Appls., Authorizations and Notifications.	"Subpart B" deleted
10.51	89.51
10.52	89.53
10.53	89.55
10.54	89.57
10.55	89.59
10.56	89.61
10.58	89.63
10.60	89.65
10.61	89.67
10.62	89.69
10.63	89.71
10.64	89.73
10.65	89.75
10.66	89.77
10.68	89.79
10.69	89.81
10.70	89.83
Subpart C—Tech. Standards.	"Subpart C" deleted
10.101	89.101
10.102(a)	89.103(a)
(b–c)	Deleted
(d)	(b)
10.103	89.105
10.104	89.107
(b) (3–4, 6)	Deleted
(b)(5)	(b)(3)
10.105	89.109
(d–g)	Deleted
10.106	89.111
10.107	89.113
10.108	89.115
10.109	89.117

Old	*New*
10.110	89.119
10.111	89.121
Subpart D—Opr. Requirements.	"Subpart D" deleted
10.151	89.151
10.152	89.153
10.153	89.155
10.154	89.157
10.155	89.163
10.156	89.165
10.157	89.167
10.158	89.169
10.159	89.171
10.160	89.173
10.161	89.175
10.162	89.177
10.163	89.179
10.164	89.159
10.165	89.161
Subpart E—Dev'l. Opr.	Subpart C—Dev'l. Opr.
10.201	89.201
10.202	89.203
10.203	89.205
10.204	89.207
10.205	89.209
10.206	89.211
10.207	89.213
10.208	89.215
Subpart F—Police Radio Service.	Subpart G—Police Radio Service
10.251	89.301
10.252	89.303
10.253	89.305
10.254	89.307
10.255	89.309
(h) (19–23)	Deleted
Subpart G—Fire Radio Service.	Subpart J—Fire Radio Service.
10.301	89.351
10.302	89.353
10.303	89.355
10.304	89.357
10.305	89.359
Subpart H—Forestry-Conservation Radio Serv.	Subpart N—Forestry-Conservation Radio Serv.
10.351	89.451
10.352	89.453
10.353	89.455
10.354	89.457
10.355	89.459
(e) (16–22)	Deleted
Subpart I—Highway Maintenance Radio Serv.	Subpart L—Highway Maintenance Radio Serv.
10.401	89.401
10.402	89.403
10.403	89.405
10.404	89.407
10.405	89.409
(f) (10–15)	Deleted
(f) (16)	(f) (10)
Subpart J—Special Emer. Radio Serv.	Subpart J—Special Emer. Radio Serv.
10.450	89.501
10.451	89.503
10.452	89.509
10.453	89.507
10.454	89.505
10.455	89.513
10.456	89.511
10.457	89.517
10.458	89.515
10.459	89.519
10.460	89.521
10.461	89.523
10.462	89.525
Subpart K—State Guard Radio Service.	Subpart R—State Guard Radio Service
10.501	89.551
10.502	89.553
10.503	89.555
10.504	89.557
10.505	89.559
Subpart L—Local Govt. Radio Service.	Subpart E—Local Govt. Radio Service
10.551	89.251
10.552	89.253
10.553	89.255
10.554	89.257
10.555	89.259
(g) (5)	Deleted
(g) (6)	(g) (5)
(g) (7)	(g) (6)

PART 11

Part 11 was redesignated as Part 91. No other change in section numbers.

PART 12

Part 12 was redesignated as Part 97. The following sections were redesignated:

Old	*New*
12.0	97.1
12.1	97.3(a)
12.2	(b)
12.3	(c)
12.4	(d)
12.5	(e)
12.6	(f)
12.7	(g)
12.9	(h)
12.10	(i)
12.20	97.5
12.21	97.9
12.22	97.11
12.23	97.7
12.25	97.83
12.26	97.57
12.27	97.13
12.28	97.79
12.29	97.59(a) and (c)
12.30	97.141
12.31	97.143
12.41	97.19
12.42	97.21
12.43	97.23
12.44(a)	97.29, 97.27
(b)	97.35(c)
(c)	97.29(b)
12.45	97.35
12.46	97.25
12.47	97.29(d)
12.48	97.31
12.49	97.33
12.50	97.29(c)
12.60	97.45
12.61	97.37
12.62	97.39
12.63	97.41
12.64	97.43
12.65	97.59(b)
12.66	97.81
12.67	97.47
12.68	97.85
12.69	97.139
12.70	97.49
12.81	97.51
12.82	97.87
12.85	97.53
12.86	97.55
12.90	97.95
12.91	97.97
12.93	97.99
12.94	97.101
12.101	97.89
12.102	97.111
12.103	97.113
12.104	97.115, 97.93
12.105	97.117

Old	New	Old	New
12.106	97.91	12.214	97.173
12.107	97.69	12.215	97.175
12.111	97.61	12.221	97.177
12.113	97.63	12.222	97.179
12.114	97.65	12.223	97.181
12.131	97.67	12.224	97.183
12.132	97.71	12.225	97.185
12.133	97.73	12.226	97.187
12.134	97.93	12.227	97.189
12.135	97.75	12.228	97.191
12.136	97.103	12.231	97.193
12.137	97.105	12.232	97.195
12.151	97.77	12.233	97.197
12.152	97.131	12.234	97.199
12.153	97.133	12.235	97.201
12.154	97.135	12.241	97.203
12.155	97.137	12.242	97.205
12.156	97.107	12.243	97.207
12.157	97.119	12.244	97.209
12.158	97.121	12.245	97.211
12.159	97.123	12.246	97.213
12.160	97.125	12.251	97.215
12.161	97.127	12.252	97.217
12.162	97.129	12.253	97.219
12.200	97.161	12.254	97.221
12.201	97.163	12.255	97.223
12.202	97.165	12.256	97.225
12.211	97.167	12.257	97.227
12.212	97.169	Appendices 1–4	Appendices 1–4
12.213	97.171		

PART 13

No change in number of part. No change in section numbers.

PART 14

Part 14 was redesignated as Part 85. No other change in section numbers.

PART 15

No change in number of part. Section 15.166 was deleted and the following sections were redesignated.

Subpart C—Radio Receivers

Old	New	Old	New
15.61	15.61	15.67	15.81
15.62	15.63	15.68	15.72
15.63	15.75	15.69	15.82
15.64	15.69	15.70	15.65
15.65	15.70	15.71	15.66
15.66	15.71		

Subpart E—Low Power Comm. Devices

Old	New	Old	New
15.201	15.201	15.210	15.222
15.202	15.202	15.211	15.229
15.203	15.203	15.212	15.212
15.204	15.204	15.213	15.213
15.205	15.205	15.214	15.235
15.206	15.211	15.215	15.236
15.207	15.221	15.216	15.237
15.208	15.227	15.217	15.238
15.209	15.228		

Subpart C—Radio Receivers

New	Old	New	Old
15.61	15.61	15.71	15.66
15.63	15.62	15.72	15.68
15.65	15.70	15.75	15.63
15.66	15.71	15.81	15.67
15.69	15.64	15.82	15.69
15.70	15.65		

Subpart E—Low Power Comm. Devices

New	Old	New	Old
15.201	15.201	15.222	15.210
15.202	15.202	15.227	15.208
15.203	15.203	15.228	15.209
15.204	15.204	15.229	15.211
15.205	15.205	15.235	15.214
15.211	15.206	15.236	15.215
15.212	15.212	15.237	15.216
15.213	15.213	15.238	15.217
15.221	15.207		

PART 16

Part 16 was redesignated as Part 93. No other change in section numbers.

PART 17

No change in number of part. No change in section numbers.

PART 18

No change in number of part. Following sections were redesignated.

Old	New	Old	New
18.1	18.1	18.44	18.24
18.2	18.3	18.45	18.25
18.3	18.21(a)	18.46	18.26
18.4	18.11	18.47	18.27
18.5(a)	18.181	18.48	18.28
(b)	18.182(a)	18.49	18.29
(c)	18.182(b)	18.51	18.262
(d)	18.182(c)	18.70	18.71
(e)	18.183	18.71	18.72
18.6	18.13	18.72	18.73
18.7	18.14	18.73	18.74
18.8	18.17	18.74	18.75
18.11	18.141	18.75	18.76
18.12	18.142	18.76	18.77
18.13	18.143	18.77	18.78
18.14	18.144	18.78	18.79
18.15	18.145	18.80	18.80
18.16	18.146	18.81	18.81
18.31	18.261	18.82	18.82
18.41(a)	18.21(b)	18.84	18.84
(b)	(c)	18.101–18.122	18.101–18.122
18.42	18.22		
18.43	18.23		

New	Old	New	Old
18.1	18.1	18.22	18.42
18.3	18.2	18.23	18.43
18.11	18.4	18.24	18.44
18.13	18.6	18.25	18.45
18.14	18.7	18.26	18.46
18.17	18.8	18.27	18.47
18.21(a)	18.3	18.28	18.48
(b)	18.41(a)	18.29	18.49
(c)	(b)	18.71	18.70

New	*Old*	*New*	*Old*
18.72	18.71	18.141	18.11
18.73	18.72	18.142	18.12
18.74	18.73	18.143	18.13
18.75	18.74	18.144	18.14
18.76	18.75	18.145	18.15
18.77	18.76	18.146	18.16
18.78	18.77	18.181	18.5(a)
18.79	18.78	18.182(a)	18.5(b)
18.80	18.80	(b)	(c)
18.81	18.81	(c)	(d)
18.82	18.82	18.183	18.5(e)
18.84	18.84	18.261	18.31
18.101–18.122	18.101–18.122	18.262	18.51

PART 19

Part 19 was redesignated as Part 95. The following sections were redesignated:

Old	*New*	*Old*	*New*
19.1	95.1	19.41	95.53
19.2	95.3	19.42	95.55
19.3	95.5	19.43	95.57
19.4	95.7	19.44	95.59
19.11	95.11	19.45	95.61
19.12	95.13	19.51	95.63
19.13	95.15	19.52	95.65
19.14	95.17	19.53	95.67
19.15	95.19	19.54	95.69
19.16	95.25	19.61	95.81
19.17	95.27	19.62	95.87
19.18	95.21	19.63	95.91
19.19	95.23	19.64	95.93
19.21	95.29	19.71	95.95
19.22	95.31	19.72	95.101
19.23	95.33	19.73	95.103
19.24	95.35	19.74	95.105
19.25	95.37	19.81	95.111
19.31	95.41	19.82	95.113
19.32	95.43	19.83	95.115
19.33	95.45	19.91	95.117
19.34	95.47	19.92	95.119
19.35	95.49	19.93	95.121
19.36	95.51		

PART 20

Part 20 was redesignated as Part 99. The following sections were redesignated:

Old	*New*	*Old*	*New*
20.1	99.1	20.15	99.15
20.2	99.3(b)	20.21	99.17
20.3	(a) and (c)	20.22	99.19
		20.23	99.21
20.4	(d)	20.24	99.23
20.5	(e)	20.25	99.25
20.6	(f)	20.26	99.27
20.7	(g)	20.29	99.29
20.8	(h)	20.30	99.31
20.9	(i)	20.31	99.33
20.11	99.7	20.32	99.35
20.12	99.9	20.33	99.37
20.13	99.11	20.34	99.39
20.14	99.13	20.35	99.41

PART 21

No change in number of part. No change in section numbers.

PART 23

Part 23 was redesignated from Part 6. No other change in section numbers.

No change in part or section numbers in the following:

PART 25
PART 31
PART 33
PART 34
PART 35
PART 41
PART 42
PART 43
PART 51
PART 52
PART 61
PART 62
PART 63
PART 64
PART 66

PART 73

Part 73 was redesignated from Part 3. No other change in section numbers.

PART 74

Part 74 was redesignated from Part 4. No other change in section numbers.

PART 81

Part 81 was redesignated from Part 7. No other change in section numbers.

PART 83

Part 83 was redesignated from Part 8. No other change in section numbers.

PART 85

Part 85 was redesignated from Part 14. No other change in section numbers.

PART 87

Part 87 was redesignated from Part 9. The following sections were redesignated:

Part 87	*Part 9*	*Part 87*	*Part 9*
87.1	9.1	87.61	9.178
87.3	9.2	87.63	9.179
87.5	9.3	87.65	9.180
87.21	9.101	87.67	9.181
87.23	9.102	87.69	9.182
87.25	9.103	87.71	9.183
87.27	9.104	87.73	9.184
87.29	9.105	87.75	9.185
87.31	9.106	87.77	9.187
87.37	9.117	97.79	9.188
87.39	9.109	87.81	9.190
87.41	9.108	87.91	9.141
87.43	9.110	87.93	9.142
87.45	9.111	87.95	9.118
87.47	9.112	87.97	9.119
87.49	9.113	87.99	9.151
87.51	9.4	87.101	9.152
87.53	9.5	87.103	9.153

Redesignation Table

Part 87	*Part 9*
87.105	9.154
87.107	9.155
87.109	9.156
87.111	9.186
87.113	9.189
87.115	9.191
87.117	9.192
87.119	9.194
87.121	9.195
87.123	9.193
87.125	9.107
87.127	9.120
87.129	9.121
87.141	9.1401
87.143	9.1402
87.145	9.1403
87.147	9.1404
87.149	9.1405
87.151	9.1406
87.153	9.1407
87.161	9.1201
87.163	9.1202
87.165	9.1203
87.167	9.1204
87.169	9.1205
87.181	9.311
87.183	9.312 and 9.315
87.185	9.313
87.187	9.314
87.195	9.321
87.201	9.331
87.211	9.611 and 9.711
87.235	9.811
87.237	9.812
87.239	9.813
87.241	9.814
87.243	9.815
87.251	9.1001
87.253	9.1002
87.255	9.1003
87.257	9.1004
87.259	9.1005
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87.273	9.1502
87.275	9.1503
87.277	9.1504
87.291	9.431
87.293	9.432
87.295	9.433
87.297	9.434
87.299	9.435
87.301	9.436
87.303	9.437
87.305	9.438
87.307	9.439
87.309	9.440
87.321	9.1101
87.323	9.1102
87.325	9.1103
87.327	9.1104
87.329	9.1105
87.331	9.611
87.333	9.612
87.335	9.613
87.337	9.614
87.341	9.711
87.343	9.712
87.345	9.713
87.347	9.714
87.349	9.715
87.351	9.716
87.353	9.717
87.355	9.718
87.357	9.719
87.401	9.411
87.403	9.412
87.405	9.413
87.407	9.414
87.409	9.415
87.411	9.416
87.431	9.451
87.433	9.452
87.435	9.453
87.437	9.454
87.441	9.1301
87.443	9.1302
87.451	9.441
87.453	9.442
87.455	9.443
87.461	9.446
87.463	9.447
87.501	9.511
87.503	9.512
87.505	9.513
87.511	9.911
87.513	9.912
87.515	9.913
87.517	9.914

PART 89

Part 89 was redesignated from Part 10. The following sections were redesignated:

New	*Old*
Subpart A—Gen. Info.	Same
89.1	10.1
89.3	10.2
89.5	10.3
89.7	10.4
89.9	10.5
89.11	10.6
89.13	10.7
89.15	10.8
89.17	10.9
Appls., Authorizations and Notifications.	Subpart B—same title
89.51	10.51
89.53	10.52
89.55	10.53
89.57	10.54
89.59	10.55
89.61	10.56
89.63	10.58
89.65	10.60
89.67	10.61
89.69	10.62
89.71	10.63
89.73	10.64
89.75	10.65
89.77	10.66
89.79	10.68
89.81	10.69
89.83	10.70
Tech. Stds.	Subpart C—same title
89.101	10.101
89.103(a)	10.102(a)
(b)	(d)
89.105	10.103
89.107	10.104
(b)(3)	(b)(5)
89.109	10.105
89.111	10.106
89.113	10.107
89.115	10.108
89.117	10.109
89.119	10.110
89.121	10.111
Operating Requirements	Subpart D—same title
89.151	10.151
89.153	10.152
89.155	10.153
89.157	10.154
89.159	10.164
89.161	10.165
89.163	10.155
89.165	10.156
89.167	10.157
89.169	10.158
89.171	10.159
89.173	10.160
89.175	10.161
89.177	10.162
89.179	10.163
Subpart C—Dev'l. Opr.	Subpart E—Dev'l. Opr.
89.201	10.201
89.203	10.202
89.205	10.203
89.207	10.204
89.209	10.205
89.211	10.206
89.213	10.207
89.215	10.208
Subpart E—Local Govt. Radio Serv.	Subpart L—Local Govt. Radio Serv.
89.251	10.551
89.253	10.552
89.255	10.553
89.257	10.554

New	*Old*
89.259	10.555
(g) (5)	(g) (6)
(g) (6)	(g) (7)
Subpart G—Police Radio Service	Subpart F—Police Radio Service
89.301	10.251
89.303	10.252
89.305	10.253
89.307	10.254
89.309	10.255
Subpart J—Fire Radio Serv.	Subpart G—Fire Radio Serv.
89.351	10.301
89.353	10.302
89.355	10.303
89.357	10.304
89.359	10.305
Subpart L—Highway Maintenance Radio Serv.	Subpart I—Highway Maintenance Radio Serv.
89.401	10.401
89.403	10.402
89.405	10.403
89.407	10.404
89.409	10.405
(f) (10)	(f) (16)
Subpart N—Forestry-Conservation Radio Serv.	Subpart H—Forestry-Conservation Radio Serv.
89.451	10.351
89.453	10.352
89.455	10.353
89.457	10.354
89.459	10.355
Subpart P—Spec. Emer. Radio Serv.	Subpart J—Spec. Emer. Radio Serv.
89.501	10.450
89.503	10.451
89.505	10.454
89.507	10.453
89.509	10.452
89.511	10.456
89.513	10.455
89.515	10.458
89.517	10.457
89.519	10.459
89.521	10.460
89.523	10.461
89.525	10.462
Subpart R—State Guard Radio Service	Subpart K—State Guard Radio Service
89.551	10.501
89.553	10.502
89.555	10.503
89.557	10.504
89.559	10.505

PART 91

Part 91 was redesignated from Part 11. No other change in section number.

PART 93

Part 93 was redesignated from Part 16. No other change in section numbers.

PART 95

Part 95 was redesignated from Part 19. The following sections were redesignated:

New	*Old*	*New*	*Old*
95.1	19.1	95.53	19.41
95.3	19.2	95.55	19.42
95.5	19.3	95.57	19.43
95.7	19.4	95.59	19.44
95.11	19.11	95.61	19.45
95.13	19.12	95.63	19.51
95.15	19.13	95.65	19.52
95.17	19.14	95.67	19.53
95.19	19.15	95.69	19.54
95.21	19.18	95.81	19.61
95.23	19.19	95.87	19.62
95.25	19.16	95.91	19.63
95.27	19.17	95.93	19.64
95.29	19.21	95.95	19.71
95.31	19.22	95.101	19.72
95.33	19.23	95.103	19.73
95.35	19.24	95.105	19.74
95.37	19.25	95.111	19.81
95.41	19.31	95.113	19.82
95.43	19.32	95.115	19.83
95.45	19.33	95.117	19.91
95.47	19.34	95.119	19.92
95.49	19.35	95.121	19.93
95.51	19.36		

PART 97

Part 97 was redesignated from Part 12. The following sections were redesignated:

New	*Old*	*New*	*Old*
97.1	12.0	97.39	12.62
97.3(a)	12.1	97.41	12.63
(b)	12.2	97.43	12.64
(c)	12.3	97.45	12.60
(d)	12.4	97.47	12.67
(e)	12.5	97.49	12.70
(f)	12.6	97.51	12.81
(g)	12.7	97.53	12.85
(h)	12.9	97.55	12.86
(i)	12.10	97.57	12.26
97.5	12.20	97.59(a) and (c)	12.29
97.7	12.23	(b)	12.65
97.9	12.21	97.61	12.111
97.11	12.22	97.63	12.113
97.13	12.27	97.65	12.114
97.19	12.41	97.67	12.131
97.21	12.42	97.69	12.107
97.23	12.43	97.71	12.132
97.25	12.46	97.73	12.133
97.27	12.44(a) (part and 1–4)	97.75	12.135
97.29(a)	12.44(a)	97.77	12.151
(b)	(c)	97.79	12.28
(c)	12.50	97.81	12.66
(d)	12.47	97.83	12.25
97.31	12.48	97.85	12.68
97.33	12.49	97.87	12.82
97.35(a–b)	12.45	97.89	12.101
(c)	12.44(b)	97.91	12.106
97.37	12.61	97.93	12.134

Redesignation Table

New	*Old*
97.93	12.104 (second sent.)
97.95	12.90
97.97	12.91
97.99	12.93
97.101	12.94
97.103	12.136
97.105	12.137
97.107	12.156
97.111	12.102
97.113	12.103
97.115	12.104 (first sent.)
97.117	12.105
97.119	12.157
97.121	12.158
97.123	12.159
97.125	12.160
97.127	12.161
97.129	12.162
97.131	12.152
97.133	12.153
97.135	12.154
97.137	12.155
97.139	12.69
97.141	12.30
97.143	12.31
97.161	12.200
97.163	12.201
97.165	12.202
97.167	12.211
97.169	12.212
97.171	12.213
97.173	12.214
97.175	12.215
97.177	12.221
97.179	12.222
97.181	12.223
97.183	12.224
97.185	12.225
97.187	12.226
97.189	12.227
97.191	12.228
97.193	12.231
97.195	12.232
97.197	12.233
97.199	12.234
97.201	12.235
97.203	12.241
97.205	12.242
97.207	12.243
97.209	12.244
97.211	12.245
97.213	12.246
97.215	12.251
97.217	12.252
97.219	12.253
97.221	12.254
97.223	12.255
97.225	12.256
97.227	12.257

PART 99

Part 99 was redesignated from Part 20. The following sections were redesignated:

New	*Old*
99.1	20.1
99.3(a) and (c)	20.3
(b)	20.2
(d)	20.4
(e)	20.5
(f)	20.6
(g)	20.7
(h)	20.8
(i)	20.9
99.7	20.11
99.9	20.12
99.11	20.13
99.13	20.14
99.15	20.15
99.17	20.21
99.19	20.22
99.21	20.23
99.23	20.24
99.25	20.25
99.27	20.26
99.29	20.29
99.31	20.30
99.33	20.31
99.35	20.32
99.37	20.33
99.39	20.34
99.41	20.35

List of CFR Sections Affected

All changes in this volume of the Code of Federal Regulations which were made by documents published in the FEDERAL REGISTER since January 1, 1964, are enumerated in the following list. Entries indicate the nature of the changes effected. Page numbers refer to Federal Register pages. The user should consult the entries for chapters and parts as well as sections for revisions.

For the period before January 1, 1964, see the "List of CFR Sections Affected, 1949–1963," which is published in a separate volume.

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73.17	
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73.24	
(b) revised	9499
73.28	
(a) and (d) revised	9499
73.35	
(a) revised; note added	7539
Applicability of amendment	9670
Amended	13899
Amended	18376
73.37	
Revised	9499
73.87	
Policy regarding applicability	3362
73.182	
(w) amended	9500
73.202	
Amended	5375
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Amended	7467
Amended	7468
Amended	7936
Amended	8222
Amended	9390
Amended	9437
Amended	10586
Amended	11362
Amended	13428
Amended	14116
Amended	15520
Amended	16196
Amended	16917
Amended	16989
73.205	
(b) and (c) revised	14116
73.207	
(b) deleted	14116
73.208	
(b) revised	14117

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73.211	
(b)(3) added; (d) revised	14116
73.213	
Added	14116
73.214	
Effective date postponed	265
Effective date	2647
73.240	
Introductory text of section and (a) and (b) redesignated as introductory text of (a) and (a)(1) and (2), respectively; newly-redesignated (a)(1) revised; new (b) and note added	7539
Applicability of amendment	9670
Amended	13900
Amended	18376
73.242	
Added	9500
73.257	
(b)(2) revised	351
(b)(2) revised	1329
73.261	
(a) revised	7471
73.276	
Added	7471
73.295	
Revised	7471
73.514	
Effective date postponed	265
73.557	
(b)(2) revised	351
(b)(2) revised	1329
73.583	
(a)(3) revised	14118
73.603	
(d) added	13896
73.606	
Amended (2 documents)	4721
Amended	7472

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Amended	18425
73.620	
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Effective date	2647
73.636	
(a)(1) revised; notes added	7539
Applicability of amendment	9670
Amended	13900
Amended	18377
73.672	
(c) revised	15520
73.682	
(a)(15) revised	4884
73.690	
Revised	15520
73.691	
(a) revised	15520
73.710	
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74.11	
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Effective date	2647
74.401	
Amended	15522
74.431	
(i) and (j) added	15522
74.432	
(d)(5) added	15522
74.438	
Added	15522
74.464	
(a)(3) added	15523
74.465	
(a), (c), and (d) revised; (e) added	15523
74.482	
Revised	15523
74.631	
(e) revised, (f) added	15524
74.902	
Revised	7023

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73.36	
(c) revised	14556
73.37	
Amended	3541
73.45	
(e)(3) deleted; (f) added	11860

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73.55	
Revised	8967
73.63	
(d) revised	14556
73.93	
(a) and introductory text of (b) revised	6520
(c) amended	14557
73.112	
Revised	10198
73.120	
(d) amended	4547
73.124	
Added	13644
73.182	
(s) and (t) revised	12719
(s) and (t) revised	13783
73.185	
Revised	12719
(i) corrected	12886
Revised	13783
73.187	
(a) (1) amended	12720
(a) (1) corrected	13783
73.190	
Amended	12720
Corrected	13783
73.201	
Amended	4480
73.202	
Amended	15, 1047, 1853–1856 (4 docs.), 3817, 3819, 4481, 5836, 5903, 6063.
Corrected	6117
Amended	6254, 6521, 7314, 8048, 9690, 9693, 11857, 11859 (2 docs.).
Revised	12711
Amended	12780, 12782, 13010, 13647, 13953, 15807
73.207	
Amended	8680
73.242	
Extension of time for filing requests for exemptions	996
(a) revised	3541
73.265	
(a) and introductory text of (b) revised	6520
(c) amended	14557
73.268	
Revised	8967
73.282	
Revised	10200
73.290	
(d) amended	4547
73.299	
Added	13644
73.316	
(k) revised	11860

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	30 F.R. Page
73.504	
(g) added	8680
73.565	
(a) and introductory text of (b) revised	6520
(c)(3) amended	14557
73.590	
(d) amended	4547
73.606	
Amended	6870
(b) amended	7106
(b) revised	7716
Amended	8164
Amended	8680
Amended	8681
Amended	9488
Amended	9694
73.636	
Amended	578
73.657	
(d) amended	4547
73.661	
Revised	6520
73.678	
Added	13644
73.682	
(a)(15) revised	3443
73.685	
(i) revised; (j) added	11860
73.687	
(b)(7) revised	8967
74	
Subpart J added	13370
74.1	
(c)(4) added	13370
74.15	
(g) added	13370
74.22	
Added	11860
74.602	
(a) amended	1851
(a) amended	12125
(f) revised	13370
74.702	
(g) and (h) added	8847
74.732	
(e)(1) revised; (i) added	8847
74.735	
Revised	8847
74.750	
(c)(2)(ii) revised	8847
74.1001—74.1083	
Subpart J added	13370

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73.21	
(c)(1) amended	8068

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73.23	
(c) and (e) revised	8068
73.41	
Revised	8068
73.52	
(b) amended	8068
73.111	
(a), (c) and (d) revised	750
73.112	
(d) added	750
73.113	
Introductory text of (a) revised; (a)(6), (c) and (d) added	750
73.114	
Revised	750
73.121	
(a) revised	10887
73.182	
(a)(4) amended; (f) revised; (v) amended	8068
73.189	
(b)(2)(i) revised	8069
73.202	
(b) amended	350 (2 docs.), 3077, 3293, 4685, 4836, 6050, 6051, 6055 (2 docs.), 6628, 7241, 7472, 8069, 8072, 8627.
(a) revised	10125
(b) amended	10364, 10366, 11431, 13237, 13653, 13756, 13798, 14399, 16317.
73.205	
Introductory text and (a) revised	10125
73.207	
Introductory text of (a) revised	10126
73.210	
(c) deleted	10126
73.211	
(b)(3) and (d) revised	10126
73.242	
(a) revised	10126
73.253	
(a) revised	7907
73.281	
(a), (c) and (d) revised	751
73.282	
(d) added	751
73.283	
Introductory text of (a) revised; (a)(5), (c) and (d) added	751
(a)(6) added	7907
73.284	
Revised	751
73.295	
(f)(5) and (i) added	7907
Effective date of (i) postponed	9217

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73.297	
Revised	7907
Effective date of (b) postponed	9217
73.311	
(b) revised	10126
73.312	
(c) revised	10126
73.319	
(c) amended	7907
73.332	
Introductory text of (b) revised; (d) through (g) added	7907
73.553	
(a) revised	7908
73.581	
(a), (c) and (d) revised	752
73.582	
(c) added	752
73.583	
Introductory text of (a) revised; (a)(5), (c) and (d) added	752
(a)(6) added	7909
73.584	
Revised	752
73.595	
Revised	3344
(f)(5) and (i) added	7909
Effective date of (i) postponed	9217
73.596	
Revised	7909
Effective date of (b) postponed	9217
73.606	
(b) revised	2943
(b) corrected	4390
(b) amended	6052, 6419, 6420, 6629, 6869, 8071, 8073, 8074, 8625, 10365, 10367, 11432 (3 docs.), 11977, 12638, 13474, 14400 (2 docs.), 14592, 14838, 15312, 16318.
73.669	
(a), (c) and (d) revised	752
73.670	
(c) added	753
Revised	13238
73.671	
Introductory text of (a) revised; (a)(5), (c) and (d) added	753
73.672	
Revised	753
74	
Subpart K added	4570
Order	6114
74.1	
(c)(4) deleted; (d) and (e) added	4569
74.601	
(d) added	15314
74.602	
(h) and (i) added	15314
74.631	
(d) and (e) revised	11721
(g) added	15314
74.632	
(e) added	15314
74.635	
(a) revised	15314
74.637	
(a) revised	15314
74.661	
(c) added	15314
74.682	
(f) added	15314, 16151
Revised	15488
74.701	
(a) revised	15315
74.731	
(b) revised	15315
74.750	
(c)(7) revised	5764
74.751	
(b)(1) revised	6315
74.761	
Revised	16315
74.783	
(a) revised	5764
74.902	
(c) revised	10743
74.1001	
(e)(1) and (2) revised; (e)(9) added	4569
74.1031	
(c) revised	4570
74.1033	
(a), (b)(3), (c), (e) and (f) revised; (g)(4) and (h) added	4570
74.1101–74.1109	
Subpart K added	4570
74.1107	
(d) revised	6314
74.1109	
(h) added	6315

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73	
Subpart G revised	10184
73.13	
Deleted	11796
73.18	
Text designated as (a); (b) added	2890

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	32 F.R. Page
73.39	
(j) added	13511
73.49	
(b)(4) and (5) deleted	10306
73.63	
(c)(5) added	11796
73.66	
(a) and (c) revised	4359
Revised	11797
73.87	
Revised	10447, 12402
73.99	
Added	10447, 12402
Corrected; (i) added	10794
73.117	
(g) and note added	15162
73.119	
(h) redesignated as (i) and revised; new (h) added	7916
73.123	
Added	10305
(b) revised	11532
73.190	
Amended	10447, 10794
73.202	
Amended	326, 926, 3151, 6138, 7336, 8528, 8914, 10302, 11877, 11879, 12615, 15166, 15545, 15711, 19187
73.209	
(c) added	8813
73.215	
Text designated as (a) and amended; (b) added	2891
73.253	
(a) amended	7531
73.257	
(b)(8) deleted	11797
73.262	
Revised	19188
73.274	
(b) revised	4359
Revised	11797
73.287	
(g) and note added	15162
73.289	
(h) redesignated as (i) and revised; new (h) added	7916
73.300	
Added	10305
(b) revised	11532
73.311	
(a) revised	11471
73.320	
(g) added	13511
73.332	
(d)(6) amended	4532

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73.515	
Text designated as (a) and amended; (b) added	2891
73.553	
(a) amended	7531
73.557	
(b)(8) deleted	11797
73.572	
(b) revised	4359
Revised	11797
73.598	
Added	10305
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73.554	(c) and (d) added	11864
73.565	Revised	11547
73.583	(e) added	11548

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73.606	(b) amended	607, 1161, 6581, 8529, 9118, 9484, 10571, 11584, 11585, 13548, 19616 (effective 10–31–72), 20554 (effective 11–8–72)
73.636	Amended	9777
73.643	(b)(2) revised	6743
73.658	(j)(1)(i) and (ii) amended	11868
	(k)(1) revised; note added	13625
73.676	Technical correction	3991
	(f) note amended	6402
73.901–73.962	(Subpart G) revised	7397
	Heading corrected	9220
73.905	Corrected	9220
73.933	(b)(14) corrected	9220
73.936	Introductory text corrected	9220
73.937	Introductory text corrected	9220
73.961	(c) revised	9220
74.437	(h) revised; effective Oct. 31, 1972	19615
74.464	Amended; effective Oct. 31, 1972	19615
74.465	(a) revised; (e) removed; authority citation revised; effective Oct. 31, 1972	19615
74.533	(a)(1), (b)(4) and authority citation revised; effective Oct. 31, 1972	19615
74.564	Revised; effective Oct. 31, 1972	19615
74.565	Revised; effective Oct. 31, 1972	19615
74.702	(f) revised	5945
74.734	(a)(4) revised	18540
	(c) revised; effective Oct. 31, 1972	19615
74.766	(a) and authority citation revised; effective Oct. 31, 1972	19615
74.790	Removed	18336
74.866	Authority citation revised	19615
74.1000—74.1083	(Subpart J) Removed	3278
74.1100—74.1131	(Subpart K) Removed	3278
74.1125	Technical correction	1045
74.1234	(a)(4) revised	18540
76	Added	3278
	Appendix B Revised	13867
	Appendix B corrected	5817
	Appendix B corrected (Appears incorrectly as Part 74)	20033
	Technical correction	7083

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76.3 Revised	13864
Effective date retroactive to Mar. 31, 1972	19616
76.5 (a) amended	13864
(a) effective date retroactive to Mar. 31, 1972	19616
76.7 (a) and (b) revised; (c)(3) and (h) added	13864
(a) and (h) effective date retroactive to Mar. 31, 1972	19616
76.11 (d) added	13865
(d) effective date retroactive to Mar. 31, 1972	19616
76.13 (a)(8) added	6590
(a)(2), (4), (6), (7), (b) and (c) revised; (a)(9) added; (d) removed	13865
(a)(4) and (b)(3) revised	13990
(a)(2), (6), and (9) effective date retroactive to Mar. 31, 1972	19616
(a)(4), (b)(4), and (c)(3) effective date retroactive in part to Mar. 31, 1972	19616
(b)(1), (3), (5), (6), and (8) effective date retroactive to Mar. 31, 1972	19616
(c)(1), (2), (4), and (6) effective date retroactive to Mar. 31, 1972	19616
76.15 Redesignated 76.25 and revised	13866
76.16 Added	13865
76.17 Redesignated 76.27 and revised	13866
76.18 Added	13866
76.20 Added	13866
76.25 Redesignated from 76.15 and revised	13866
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76.27 Redesignated from 76.17 and revised	13866
76.31 (a)(3) and (4) revised; (a)(6) amended	13866
(a)(3), (4), and (proviso) effective date retroactive to Mar. 31, 1972	19616
76.51 (b) amended	13866
(b) effective date retroactive to Mar. 31, 1972	19616
76.53 Amended	13866
Effective date retroactive to Mar. 31, 1972	19616

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76.54 (a) revised; (c) and note added	13866
(a), (c), and note effective date retroactive to Mar. 31, 1972	19616
76.57 (a)(2) revised	13866
(a)(2) effective date retroactive to Mar. 31, 1972	19616
76.59 (a)(5), (b)(1) and (d) revised	13867
(a)(5) and (b)(1) effective date retroactive to Mar. 31, 1972	19616
(d) (1) and (2) effective date retroactive to Mar. 31, 1972	19616
76.61 (a)(3), (b)(1), and (e) revised	13867
(a)(3), (b)(1), and (e)(1) and (2) effective date retroactive to Mar. 31, 1972	19616
76.93 Introductory text of (b) revised	13867
76.99 Added	13867
76.201 (a) revised	13867
76.251 (a)(2) and (c) revised	13867
(a)(2) and (c) effective date retroactive to Mar. 31, 1972	19616
76.305 (f) added	6590
76.311 Added	6590
(c)(1)(i)(*c*)(*1*) revised; (d)(1) corrected	7083
76.409 Added	6592
76.605 Introductory texts of (a) (5) and (12) revised	13867
(a) (5) and (12) effective date retroactive to Mar. 31, 1972	19616
76.609 (a) amended	13867
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78 Added	3292
78.11 (i) revised	15926
78.16 Added	15926
78.17 Redesignated 78.18; new 78.17 added	15926
78.18 Added (redesignated from 78.17)	15926
78.19 (c) and (d) added	15926
78.20 Added	15926
78.21 Revised	15927
78.22 Added	15927
78.33 Added	15927
78.35 Added	15927
78.75 Added	6592
78.103 (a) revised	15927
78.107 (b) revised	15927

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